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ABSTRACT

Environmental education activities for young children are provided. Focusing on trees/plants, food/harvesting, energy, recycling, and animals, the simple activities have been designed to foster development in the following areas: social, self-awareness, behavior, language, motor development, and problem-solving. Recommended age range, recommended number of children participating, materials needed, instructions, and helpful hints (accompanied by illustrations) are provided for each activity. Typical activities include making a hand tree; spackle painting with leaves; preparing a dry leaf collage; fingerpainting with leaf shapes; making applesauce, peanut butter, fruit salad, fruit smoothies, cornbread, pumpkin pie, vegetable stew, and whole wheat muffins; making sun tea; making solar collectors; constructing paper airplanes; working with balloons, cork sailboats, candles, and drills; recycling projects, emphasizing classification skills; fingerpainting fish; drawing whales; constructing an ocean mural; constructing birdfeeders from plastic bottles and pinecones; making and using binoculars; creating animals from playdough and potatoes; face painting; and making animal hats. Lists of recommended books and suggestions for field trips are also provided. (JN)

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EARTH, SEA, & SKY.

ENVIRONMENTAL ACTIVITIES
FOR PRE-SCHOOL THROUGH
FIRST GRADE

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To the parents and children of The Amazon Child Center.
Continue to work and grow together; you're a great team!

We would like to thank the following people for contributing
advice, time, and curriculum ideas to this book:

Sara K. Burch
Paul Ciminello
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About the book...

Cooperative Child Care- parents working together to provide quality, low-cost child care. It sounds like some kind of "hippie" gathering that could last no more than a month, and never a year. However, the Amazon Child Center, now in its third year of operation, is continuing to grow and expand according to the needs and values of its members.

The Amazon Child Center (located near the University of Oregon) began when many student parents were finding it impossible to go to school and afford quality child care. The quality was an important issue as it emphasized that these parents did not want a program where they could just drop off their children and leave. They wanted to take an active role in the development of the program (cooking, bookkeeping, teaching, maintenance, etc.).

One of the most essential aspects of the Amazon Child Center is integrating the parents and the professional staff together into a cohesive and exciting classroom. Many parents work as teacher aides in the classroom and thus they develop an understanding of young children's social as well as developmental needs. Parents learn for example, that an activity which exposes young children to working with scissors helps them to develop eye-hand coordination, an important pre-academic skill.

This book is written to present activities and games to adults who have not been trained in curriculum development for young children. In working with parents, we often found that curriculum books were filled with words and ideas that were difficult to understand. Many parents would stay away from these books as they felt that one must be a trained teacher to understand their value. The activities and ideas that we are presenting are suggestions and guidelines for parents, students, babysitters, and anyone interested in young children. Extensive training in child development or education is not necessary to enjoy Earth, Sea, and Sky; anyone can use and learn from it.

About the curriculum...

Our curriculum is an important part of our program. We feel that it is important to expose young children to a variety of activities in an "open ended" way. We want to provide children with many opportunities for growth through exploring and experiencing. For these reasons our curriculum is planned around various themes. The themes are presented in an order that we found to work best for us. This order, however, may be changed according to the children's needs and capabilities.

In planning a curriculum, projects and activities should be "child oriented". Many times children are presented projects that are "adult oriented" or "result oriented". Adult or result oriented projects expect a certain end product and provide a rigid process for achieving that result. Child oriented projects present the child with the necessary materials and a model, but do not dictate exactly how the materials should end up. These projects are "process oriented" and leave the children to create according to **their** own interests and desires. A process oriented approach can set the groundwork for a child who is interested and involved in his/her daily school presentations and assignments.

Children thrive on variety; however, they also thrive on familiarity. An excellent way for a child to feel competent and to understand a certain process is to offer him/her projects using similar materials, but changing the emphasis of the process each time. An example of this could be hammering nails into a piece of wood one week, where the children can randomly hammer nails to get a feeling of the hammer, nails, and wood. A good follow-up activity could also involve hammering; however, this time present the children with pre-cut wood and pre-drilled nail holes so the children get an idea of where to start hammering the nails. Guide them in nailing together the wood to form a bird house or feeder. This time you could emphasize the purpose of their nailing; "making a bird house" and also what this means to the birds. Through this process the children will become more comfortable with their hammering skills as well as creating a finished product.

Children need the chance to experiment and to **explore**. Through awareness of a child's need to be creative, an adult can design a curriculum that is both exciting and instructive.

About the theme...

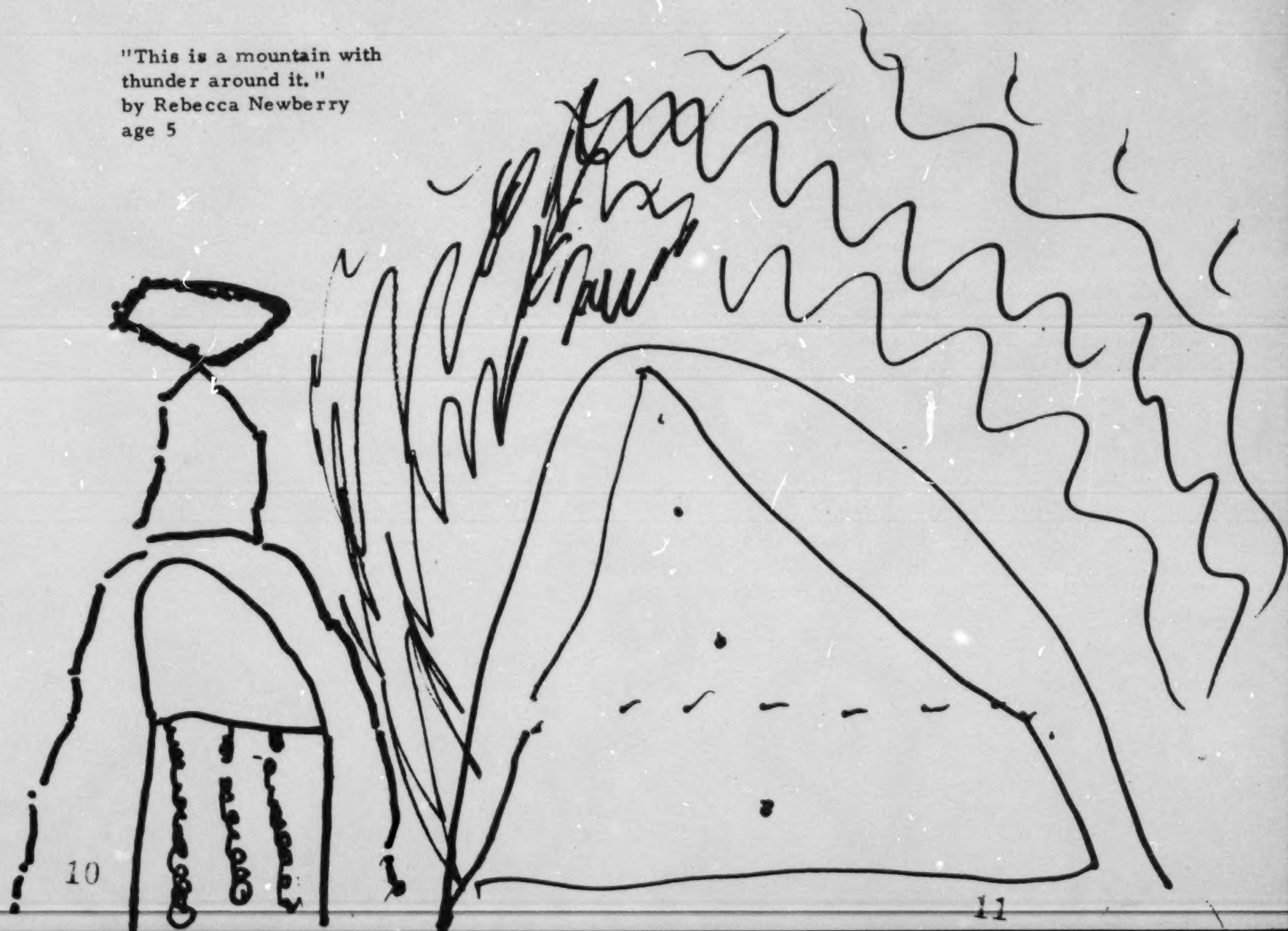
We chose the environment as our main theme because it encompasses everything that touches our lives. We feel that children should be exposed to the elements of life that affect their daily existence. By breaking down the environment into workable and recognizable objects and ideas, we can show young children how these objects and ideas can affect us and how we can influence them in return. If we can provide positive experiences both inside and outside of the classroom, we can make children more aware of their relationship to the environment.

An example is the exploration of animals, and the many needs they share in common with us. By feeding the classroom fish, the children become aware that needs such as food are shared by "animals" and people.

It is also important for children to learn that they have an active role in the environment. Although in certain instances they are powerless to affect their environment (diseases and natural disasters), children need to be aware that they can be responsible for certain other actions (forest fire and pollution).

With this in mind, it is important to present activities where the children can positively affect the environment. A nice activity would be to plant and maintain a vegetable garden. Remember, young children are logically thinking people. Exposure to many different "hands on" experiences helps children to realize the effect of their actions on our environment.

"This is a mountain with
thunder around it."
by Rebecca Newberry
age 5



Areas of development...

5

In setting up our curriculum at Amazon, we felt it was necessary to focus our attention on certain "areas of development". With these areas in mind, we created our curriculum based on the needs and skills of the children. What children learn depends upon the emphases that you place on their daily activities. We used these areas to aid us in planning simple daily activities that helped the children develop important skills. The following are areas of development which we have used to set up our curriculum.

Social:

To provide the opportunity to learn social skills through play experiences with other children. Adults should help in observing and interpreting children's actions as needed.

-Mary is playing with a set of blocks. John grabs one of her blocks and takes it to his own block building. Mary runs over, hits John, and takes her blocks back. The adult helps John to learn to ask Mary to share the blocks instead of taking them. The adult can also help Mary to learn to tell John instead of hitting him that she wants her block back.

Self Awareness:

To provide the opportunity and support for children to become more aware of their abilities.

-John spends a long time making a block building and is proud of his accomplishment. The adult sees John's effort, and comments on how much work he has put into his building. The adult also asks John to tell about his building. What kind of building is it? Who lives/works there? Where is the building? This helps John gain a positive view of himself and of his capabilities.

Behavior:

To provide the guidance needed to learn self-control of one's own behavior rather than "adult-control" of behavior. This should include a clear sense of acceptable and unacceptable behavior as well as adults who can help the child re-direct unacceptable behavior into acceptable behavior.

-John is building with the blocks. As he finishes his building, Mary knocks it down. The adult tells Mary that she may not knock down John's building, but she may build her own building to knock down. This re-directs Mary's desire to knock down a building into acceptable behavior.

6

Language:

To provide the opportunity to develop language skills and to increase verbalization skills.

-Mary is building a very tall building using many different shaped and colored blocks. The adult talks with Mary about her building, asking her questions that encourage her to describe her building. What kind of shapes did you use? How many colors of blocks are there? Is it a tall or short building? Through this kind of conversation, Mary develops the language skills that reflect her growing ability to use words effectively.

Motor Development:

To provide the opportunity to develop coordination of large and small muscles through the use of games and activities.

-John is trying to make a very tall building. The adult helps him to practice putting the blocks on very carefully so that his building does not fall down. John is learning to coordinate the small muscles in his hands by doing this activity.

Problem Solving:

To provide the opportunity and the "hands on" experiences that enable children to confront problems and find their own answers.

-Mary has built part of her building into a "T" shape. Now she wants to build another part on the platform of the top of the "T". She puts a block on one end of the platform and finds that it falls down. The adult helps her to put a block on each end simultaneously in order to keep the platform balanced. Mary learns about balance through guided trial and error experiments.

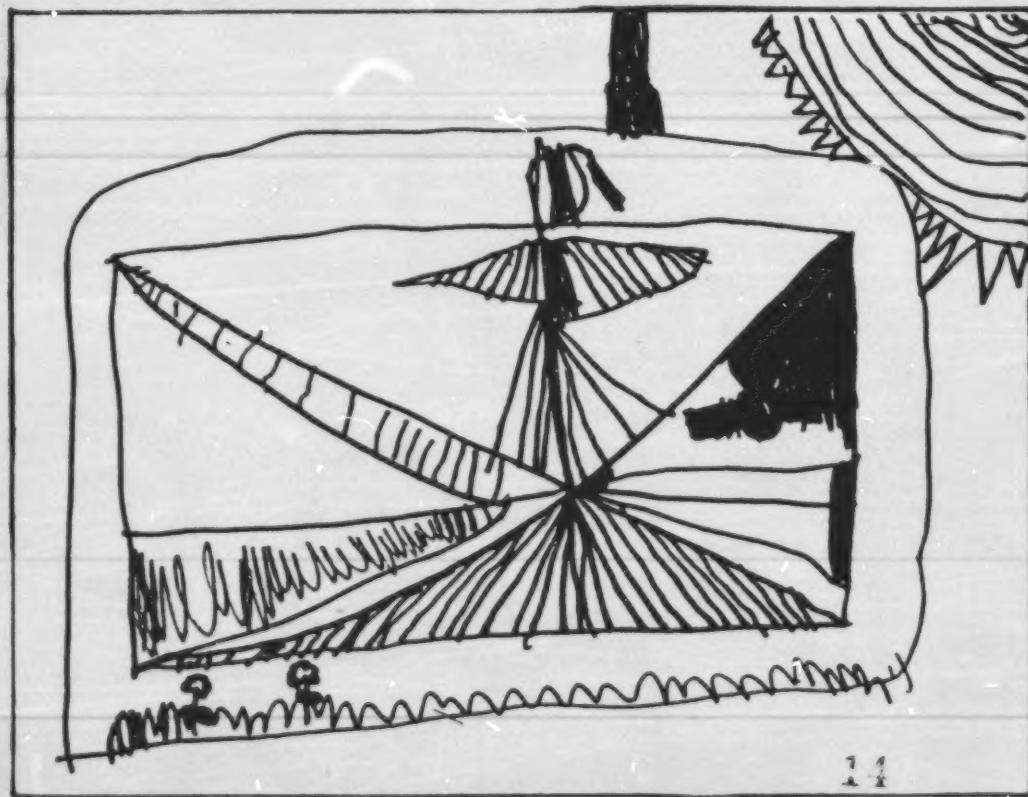
As you can see from the above examples, all of these areas of development can be combined into one activity if desired. More often an activity will focus on one or two areas, touching upon others through incidental learning. Whether in structured activities, or in simple free play, it is helpful to keep these areas in mind.

Trees & Plants

We chose Trees and Plants to begin our study of the environment because they are so visible and their by-products are widely accessible to us. The exploration of trees and plants can provide children with a knowledge of tree growth and development which they can generalize to other aspects of their environment. This understanding of trees and plants can provide a basis for further exploration into other aspects of the environment.

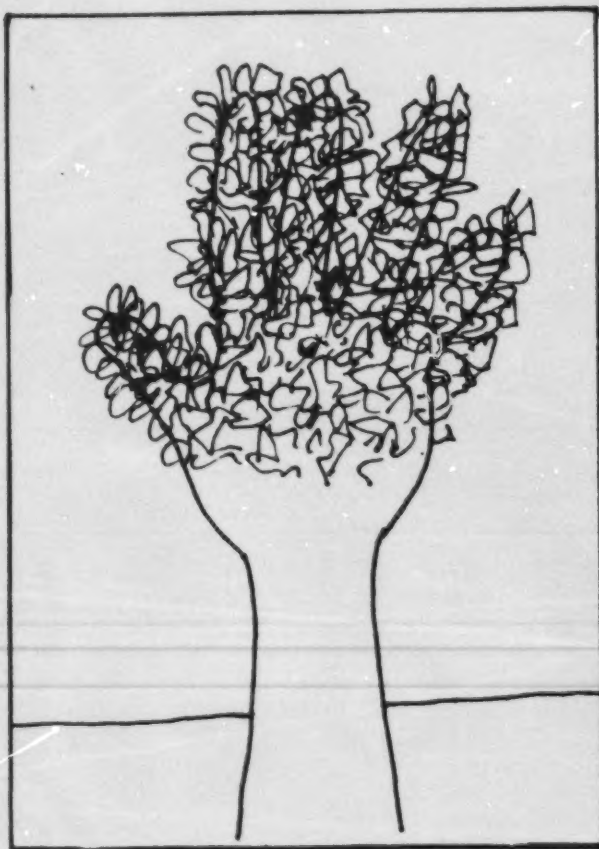
When young children are working with the natural elements, such as dirt, wood, or water, try to give them time to handle and learn about the properties each one possesses. Children need to explore these natural elements through the use of their senses. When working with wood, for example, children need to feel, smell, see, and hear, the different properties that each kind of wood possesses.

Through open exploration and planned presentations and projects, young children can gain a good understanding of the growth and development of Trees and Plants.



"This is my yard.
This is a bird in
my yard and that's
another tree that
fell over."

Mariah Fairley
Age 5



Hand Tree

Age range: 2-6

of children: 5-6

Ingredients: -construction paper

- tissue paper cut into 1 inch squares
- crayons
- glue
- newspaper for covering table

How to do it:

1. Each child lays his/her hand and forearm down on the construction paper. Spread out the fingers!
2. Trace around the hand and forearm with a crayon. Lift up the child's hand. This forms the trunk and the branches of the tree.
3. Crumble individual squares of tissue paper and glue them on to the branches. Have the children spread glue on the paper and stick the tissue paper to the hand outline to look like leaves.
4. Children can color the trunk of the tree and some background (grass, sky, sun, etc).

Helpful Hints:

- If fingers get sticky, put a damp washcloth on the table so children can get rid of the glue without going all the way to the bathroom.

Variations:

- Use different colors of tissue paper for different seasons; red, yellow, orange and brown for fall; yellow and green for spring or summer.
- Make a series of hand trees to show changes of season. Be sure to make one with no leaves for winter.

Window Leaves

Age range: 3-6

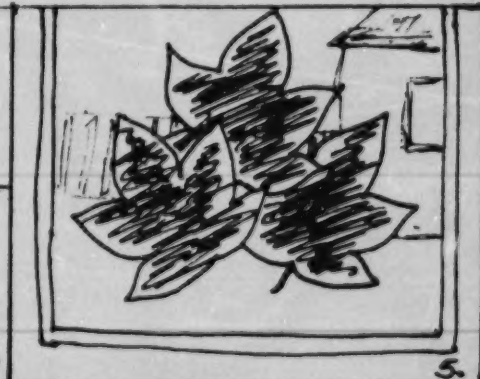
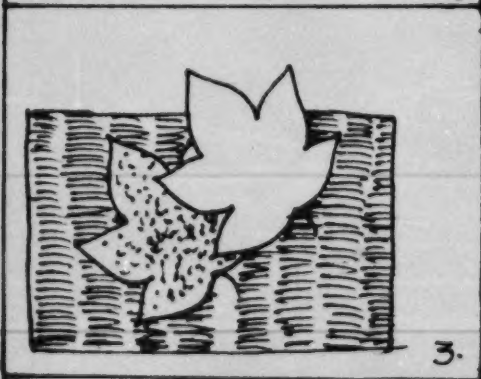
of kids: 5-6

Ingredients:

- wax paper
- crayons (fat ones are the easiest)
- vegetable peeler or grater
- iron
- scissors
- newspaper

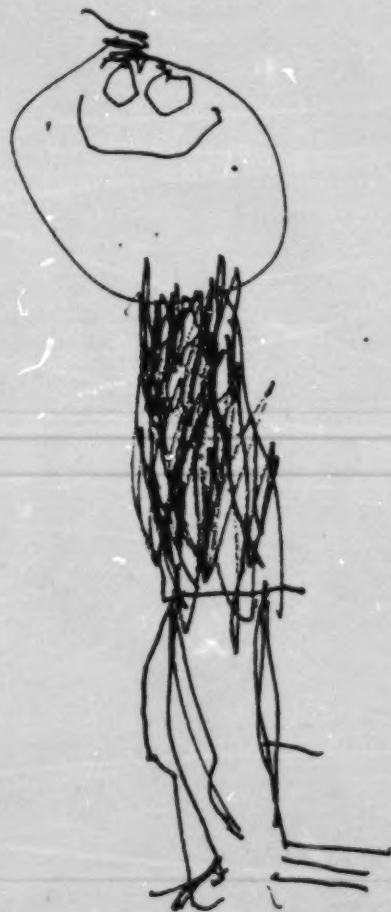
How to do it:

1. Before beginning the project, make crayon shavings by using the vegetable peeler or grater. You need about 2 tbs per leaf.
2. Cut the wax paper into leaf shapes (see patterns at end of chapter). You need two shapes for each finished leaf.
3. Lay out some newspaper on a table. Set down one leaf shape and have the children sprinkle crayon shavings on the leaf.
4. Put the second leaf on top of the first leaf.
5. Cover both leaves with more newspaper and iron on a low setting for about a minute so that the crayon shavings melt. Be sure to put the iron away from children's reach between ironings.
6. Take the leaf out and hang it in the window. The light that comes in the window makes the colors brighter.



Helpful Hints:

-If there is another adult to help, one person can help the children with the crayon shavings, and the other can do the ironing.



Variations:

- Cut any kind of shape from the wax paper; animal shapes, fish, pumpkins, cars, trucks, holiday shapes.
- Try combinations of primary colors and discuss what happens to the colors (blue and red make purple, red and yellow make orange etc.)
- Use square pieces of wax paper and surround it with a black construction paper frame for a stained glass window effect.

Assemble-A-Tree

Age range: 2-6

of children: 4-10 (depending on how much help they need)

Ingredients:

- paper with the pattern for assemble-a-tree (at end of chapter) traced on it.
- scissors
- glue
- another piece of paper
- crayons

How to do it:

1. Cut out the pattern pieces with the scissors.
2. Color the pieces, be sure to draw in the roots of the tree.
3. Glue the pieces on the second piece of paper. Make sure the pieces are in the right place.
4. Talk about different tree parts, and how they make a tree.

"That's me. I'm just standing there."

Erycka Organ
Age 5

Fruit Seed Trees

11

Age range: 2-6
of children: 5-6

Ingredients: -seeds (oranges, lemons, apples, grapefruit are best)
-egg carton, paper cup
-potting soil

How to do it:

1. Dry fruit seeds for a few hours (if the children save them from morning snack they will be ready to plant in the afternoon.)
2. Fill an egg carton, paper cup or peat moss pot with wet soil. Make sure everyone puts their name on their cup.
3. Plant the seeds near the surface of the soil.
4. Water the seeds every day.
5. Measure the growth of the seed trees by taping a piece of paper on the wall behind the plant. Mark where the top of the plant is every few days.

Variations:

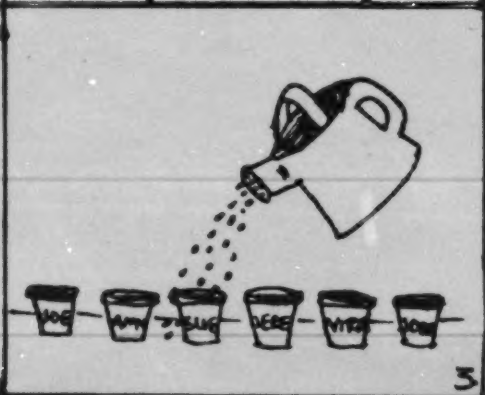
- Plant any kind of seed you have or can find.
- organically grown beans will also grow when planted.



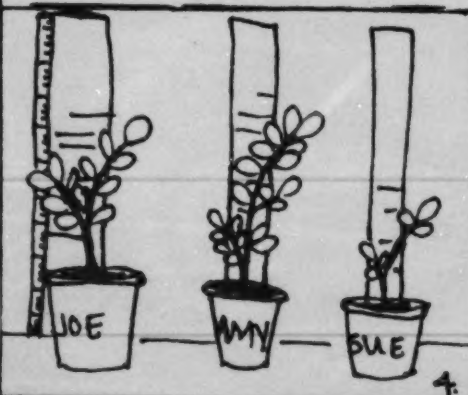
1.



2.



3.



4.

Woodworking

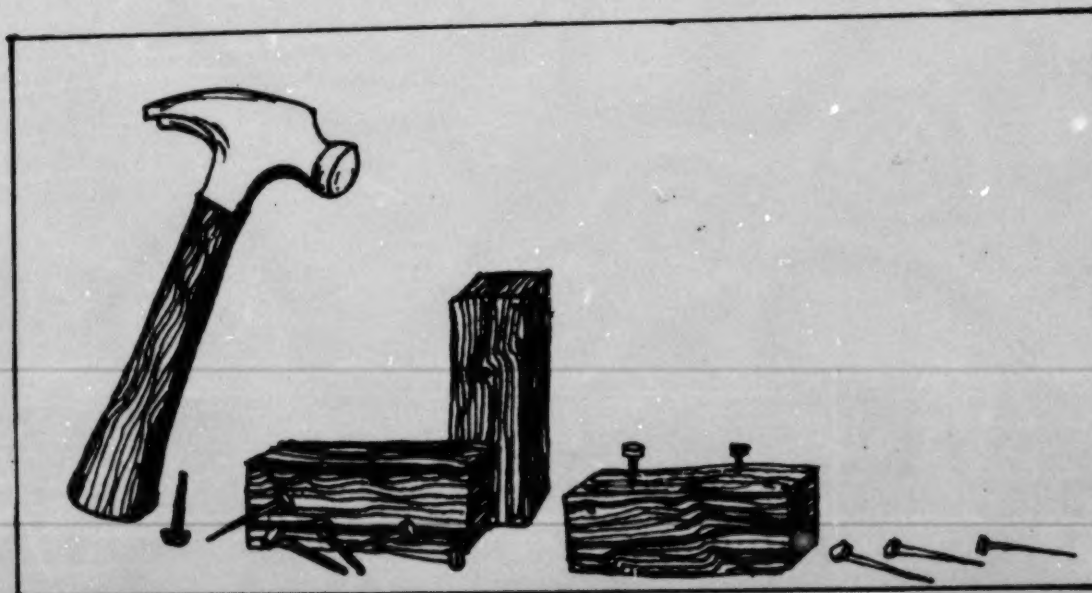
Age: 3-6 # of children: 3-4

Ingredients:

- hammers
- #4 nails with heads
- electric drill,
- 1ft long 4"X4" or 2-1ft long 2"X4" nailed together. (Ask at any building site for these scraps)

How to do it:

1. The night before, drill holes randomly on one side of the block. Make the drill bit a little smaller than the #4 nails so that the nails can be started and driven into the wood easily by the children. Also around each of the holes draw a quick circle with crayon so the kids can easily spot the nail holes.
2. Show the children the basics of starting a nail, and then hammering it all the way down into the wood. Then let them place the nail in the hole themselves and begin nailing on their own. Make sure to have kids nailing on a solid surface that does not move around. Make sure the children have plenty of space to work on their project.
3. Save wood for another project that will be described following this one.



Helpful Hints:

- If the hammers are too long, have them choke up on the handle.
- Have the children swing their hammers at the nail, not just push on it.
- Don't use old wood blocks, they turn very hard and it's difficult to drive nails into them.

Variations:

- Holes can be drilled in the outline of the child's name or just letters.

Wooden Spacecraft

Age range: 3-5

of children: 4-5

Ingredients:

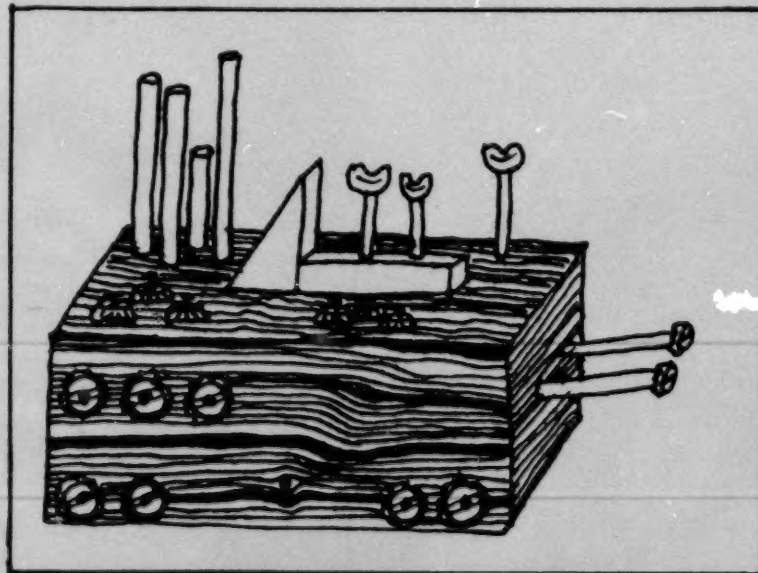
- wood blocks from previous project
- 5-6 bottle caps per child with holes through top
- styrofoam chips or bits
- #4 nails
- wood scraps of different angle shapes (given away at any cabinet shop or building site)
- glue

How to do it:

1. Before you do the project drive a nail through the top of the bottle caps, then pull it out.
2. Give each child a block of wood, 5-6 bottle caps, nails and styrofoam bits. Also the wooden scraps can be given out and can either be nailed or glued to the block.
3. Let the children use their imagination to create their own unique vessel.

Helpful Hints:

- If children can not get nails started by themselves they can glue the styrofoam or bottle caps to the wood.



Spackle Painting With Leaves

Age range: 4-6

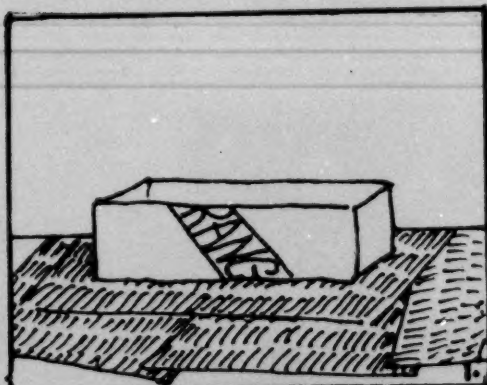
#of children: 4-5

Ingredients:

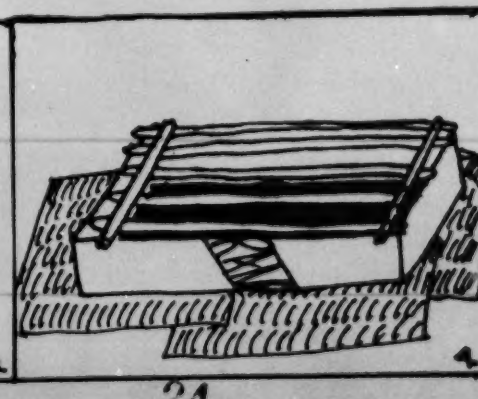
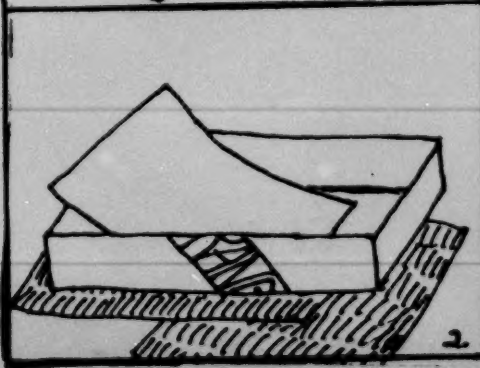
- one box for each child, cut to about 6 inches high
- one wire cooling rack or oven rack for each child
- one toothbrush for each child
- paper, cut to fit into the bottom of the box
- paint
- leaves or leaf shapes
- paint smocks
- newspaper for table and floor (this is a messy project)

How to do it:

1. Put the boxes on the newspaper and put a piece of paper into the bottom of each box.
2. Lay the leaves or leaf shapes on the paper inside the box.



3. Put a cooling rack or oven rack on top of each box.
4. The children dip a toothbrush into the paint and rub it across the rack in a perpendicular motion. The paint will splatter onto the paper and the leaves. Several colors of paint can be used. The more paint on the paper the easier it will be to see the print.
5. Lift off the rack. Carefully lift off the leaves. You will see silhouettes of the leaves.
6. Dry the pictures flat so the paint does not run.

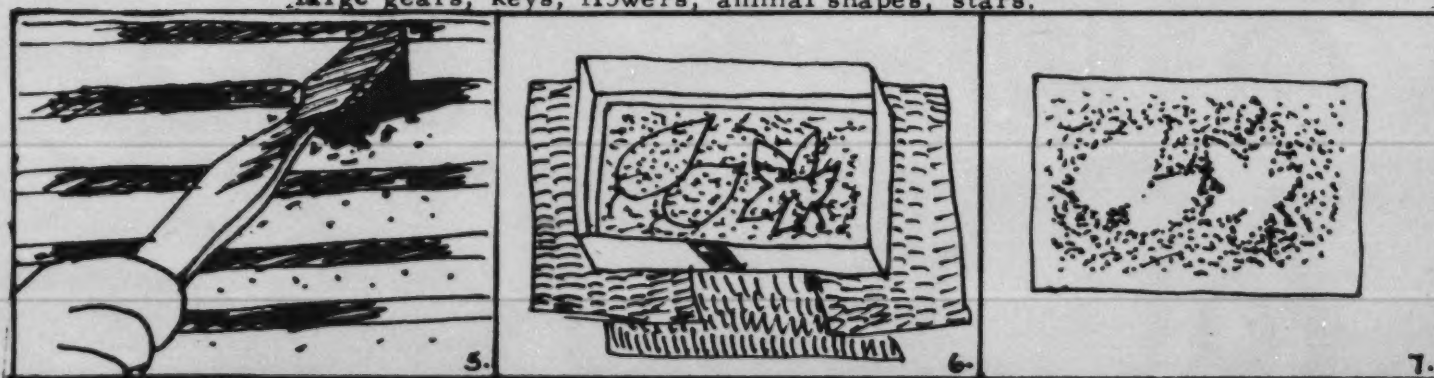


Helpful Hints:

- This is a messy project so be sure to have smocks on hand. Smocks can be made from old baggy shirts, aprons, plastic garbage bags, or anything big enough to fit over the child's clothes.
- Be sure to spread newspaper all around the floor so as to minimize your clean-up time.
- Have the children help with the clean-up. You might be surprised to see how much help they can be.

Variations:

- Substitute any shape for the leaf shapes.
- You can use real objects or shapes cut from paper; large gears, keys, flowers, animal shapes, stars.



16 Baker's Dough Trees

Age range: 3-6

of children: 5-6

Ingredients:

- flour
- salt
- water
- food coloring
- egg (for glaze if desired)

How to do it:

1. Before beginning the project, mix three batches of baker's dough using the following recipe for each batch. Use a different color for each batch.

4C flour 1&1/2 C water 1C salt food coloring

2. Have the children use the dough to make trees, using one color for the trunk, another color for the branches, and another color for the roots. Talk about the different parts of the tree and how they all work together for the tree. Children like to use different colors other than real tree colors such as purple, pink, red, etc. The different colors make the tree look silly as well as helping the children to learn about the different tree parts.

3. Let the children paint the finished trees with a beaten egg to give them a shiny finish.

4. If the trees are going to hang on a string, make a hole at the top of the trunk with a pencil.

5. Place the trees on a cookie sheet and bake at 350 until hard.

6. When done, thread some yarn through the hole and hang in a window or on a mobile.

Helpful Hints:

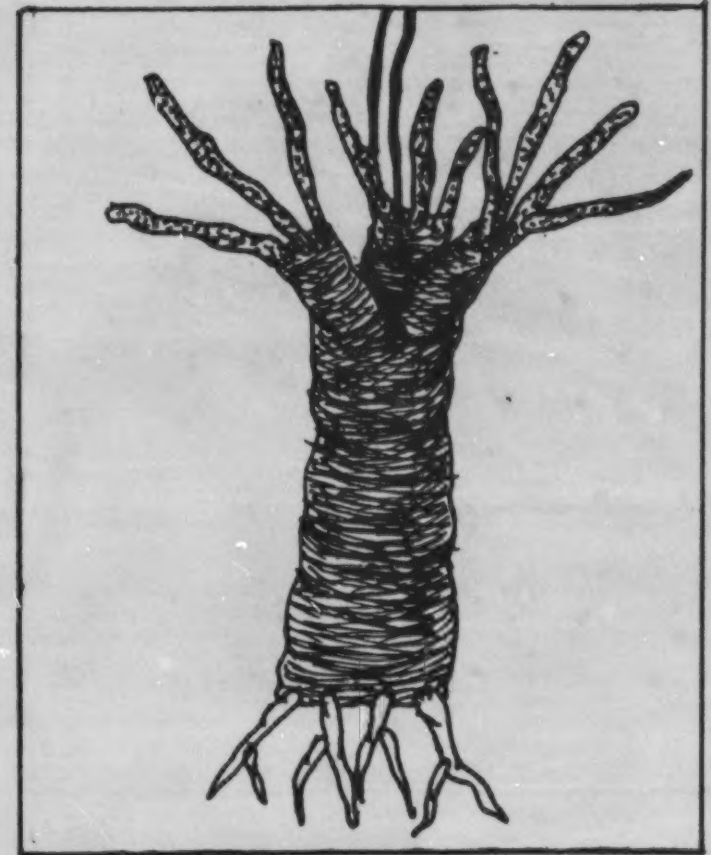
-Thicker trees will take longer to bake. Encourage children to try to make thinner trees.

Variations:

-Make any shape you want; animals, letters, numbers, holiday shapes, etc.

-Experiment with colors- try purple, blue and green trees, or yellow, red, and orange trees.

-Use cookie cutters to make ornaments.



Dry Leaf Collage

17

Age range: 2-6

of children: 5-10

Ingredients:

- leaves
- paper
- glue

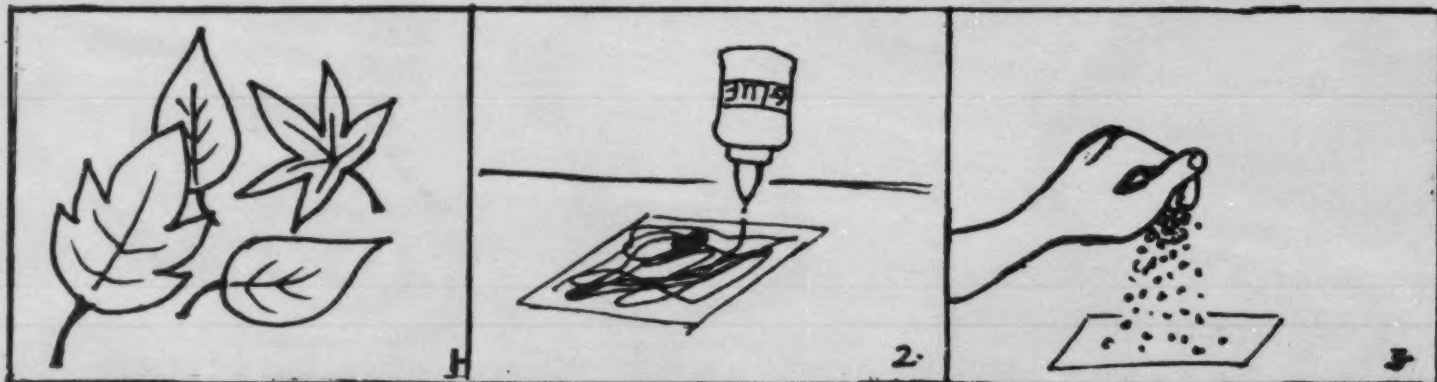


How to do it:

1. Take a walk with some children to collect leaves that have fallen to the ground. Lay them out and leave in a warm place to dry overnight.
2. Have children spread glue on their paper in any pattern they want, or you can encourage them to make specific shapes.
3. Have the children crumble the dry leaves with their fingers. Encourage them to make the pieces as small as they can. This is a great fine motor exercise for young children.

Helpful Hints:

- This is a great project to do in the fall when the colors of the leaves are bright. Try to do this project when the colors have reached their peak.
- Always use newspaper for the tables when using glue, it really saves on clean-up time.
- Try to have something that the children can use to spread the glue rather than using their fingers; toothbrushes, tongue depressors, and popsicle sticks all work well.



18 Fingerpainting with Leaf Shapes

Age range: 2-6

of children: 4-5

Ingredients:

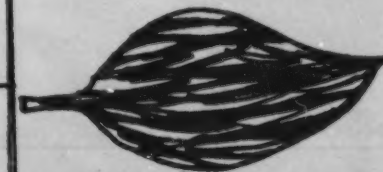
- liquid laundry starch
- tempra paint-liquid or powder
- lightweight paper cut into leaf shapes (see pattern guide at end of chapter)
- serving trays (cafeteria trays are helpful, but not necessary)
- newspaper for floors
- paint smocks for children to wear

How to do it:

1. Have each child put on a smock that covers their clothes well. This is a messy project so have enough newspaper for floors and tables to minimize your clean-up time.
2. On either the trays or table top areas, put about 2 tablespoons of starch and a little less paint. If you use trays, put newspaper under them first.
3. Have children mix the starch and paint together on the tray or table with their hands. When it covers the area they can trace patterns or pictures with their fingers.
4. Write the child's name on the back of the paper leaf shape, then make a print of the painting by carefully laying down the leaf shape with your fingertips. Try not to wiggle the paper while you are doing it. Carefully peel the paper off of the painting. Now you have a print of the painting.
6. Children can continue making prints as long as the starch-paint mixture lasts.
6. Hang the prints on a clothesline, fishnet or coat hanger. The paper will curl as it dries, giving the leaves a realistic look.

Helpful Hints:

- We recommend using trays, they are much easier to clean.
- Try to have another adult to help. This is such an instantly satisfying activity, children like to make many prints.
- Help children focus on changing colors and the effects of mixing specific colors (blue & red, blue & yellow)
- If you don't want prints to curl, lay them flat on waxed paper.



Variations:

-Substitute any shape for the leaf shapes; pumpkins, clouds, fish, whales, cars, trucks, holiday shapes, or whatever you can think of.

-Try lots of combinations of colors: orange, red, brown, yellow, for the fall season; greens and yellows for spring and summer.

-Try colors for concepts such as blue, green and white for the ocean; blue, gray, white for clouds; etc.



"My family."
Rebecca Newberry
Age 5



Recycle - Tree

Age range: 2-6

of children: 5-10

Ingredients:

- large piece of bark
- large piece of cardboard(side of a refrigerator carton)
- lightweight wire (telephone wire is great)
- any kind of recyclable material (styrofoam, bottle caps, yarn etc).
- glue

How to do it:

1. Before the children start working, wire the piece of bark to the cardboard. This forms the trunk of the tree.
2. Have the children collect all kinds of materials on the playground, at home, in school. Paper tubes from toilet paper or paper towels, long boxes or egg cartons cut in half lengthwise make good branches. Styrofoam packing material, aluminum foil scraps, and small boxes make good leaf material. Strings, yarn and cord work well for roots.
3. Glue the recycled material onto the cardboard any way you want to create branches, leaves, and roots.

4. Label the different tree parts as the children describe their function. Talk with children about the importance of each tree part and its contribution to the tree.

Helpful Hints:

- To avoid confusion, have 5 children working on the tree collage at one time. Rotate the children by providing another activity in another room.

Additional Activities

Tree Friend: Have each child pick out a tree near your school or home and draw a picture of it at the beginning of the year. Find the tree periodically and draw a picture of it each time. How has it changed? What does it look like during each season? What about this tree is special? Do you know what kind of tree this is? Could we give it a name? Each child can make a book of his/her drawings about the tree.

Leaf Sorting: Collect lots of different colored leaves in the Fall. Get as many different shapes, colors, sizes as you can find. If you have access to a laminating machine, laminate them for future use. If not they can be preserved between damp paper towels in a cool place for several days. Have the children sort the leaves according to size, shape, and color.

-Show me the set of green leaves; the set of yellow leaves; the set of red leaves. Are there any leaves that do not go in any of these sets?

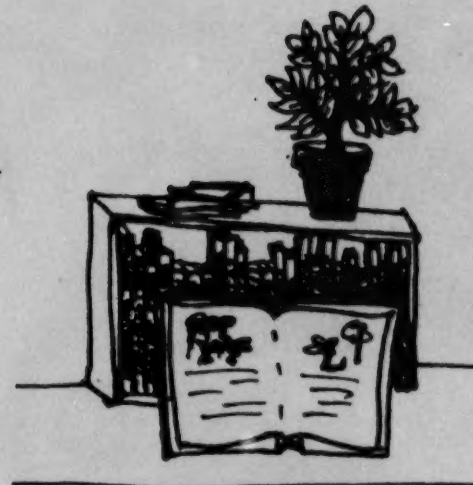
-Show me the set of green leaves that are big. Where is the set of green leaves that are pointy?

-Show me the set of yellow leaves that are not little and not pointy. (This kind of question with negative attributes can be used after children have had some practice. However, this is usually too difficult for very young children.)

Dead Tree: Take a walk to a nearby forest or park to find an old, rotten log. Bring it back for the children to study. Give them magnifying glasses and let them tear the log apart. Encourage the children to use the magnifying glasses to discover what lives inside the log. Have little jars or cups for the children to put the insects in that they might find. Talk about how some insects live inside trees and use them for their food. This is a very messy project so be sure to do it outside, or lay plenty of newspaper on the floor.

Books

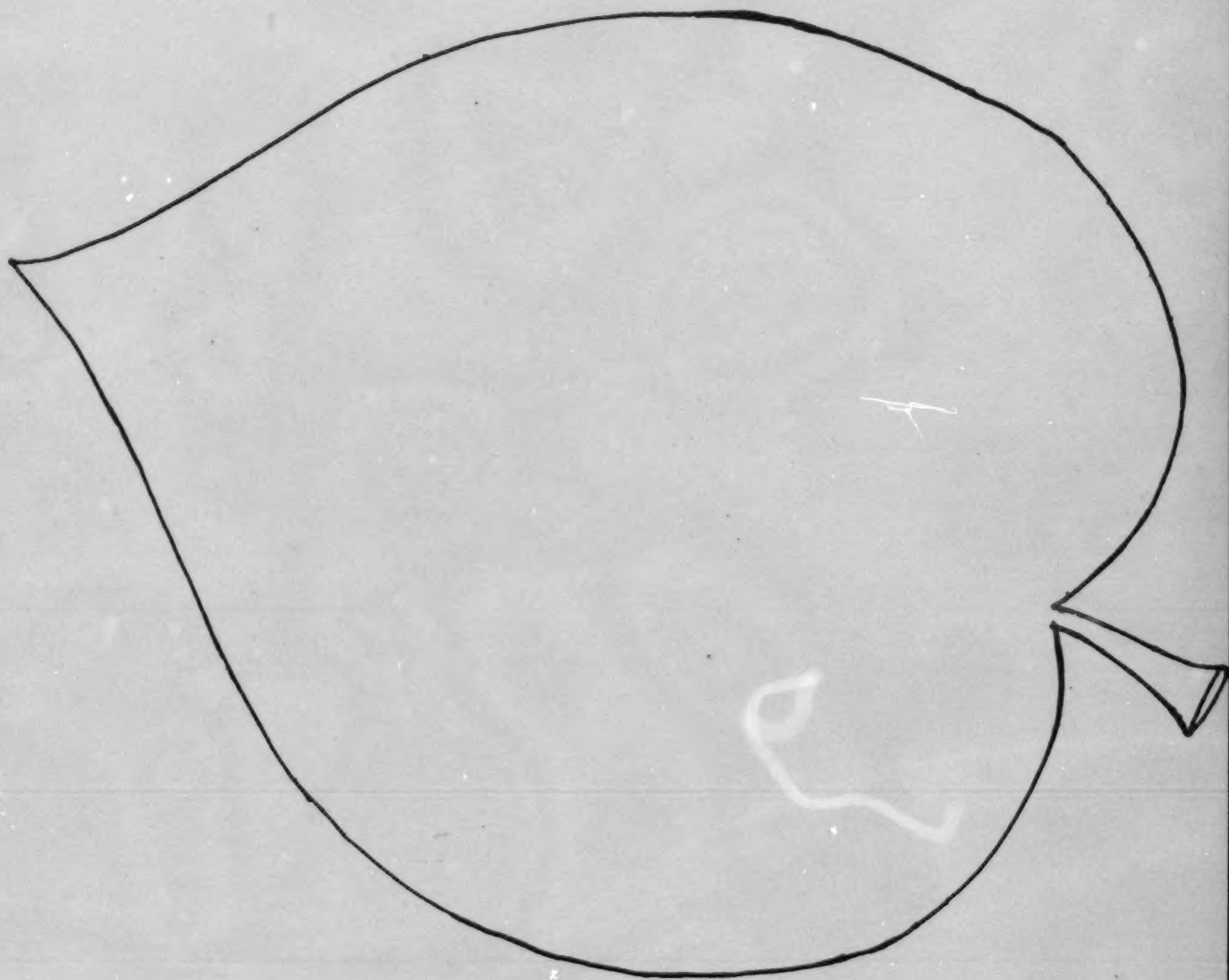
The Story of Johnny Appleseed, by Alikei
Exploring City Trees, by Margaret Anderson
Down Come the Leaves, by Henrietta Bancroft
The First Book of Trees, by M. B. Cormack
The Curious Naturalist, by the Massachusetts Audubon Society
Working with Wood, by Shelia Parker
The Giving Tree, by Shel Silverstein
A Tree is Nice, by Janice May Udry

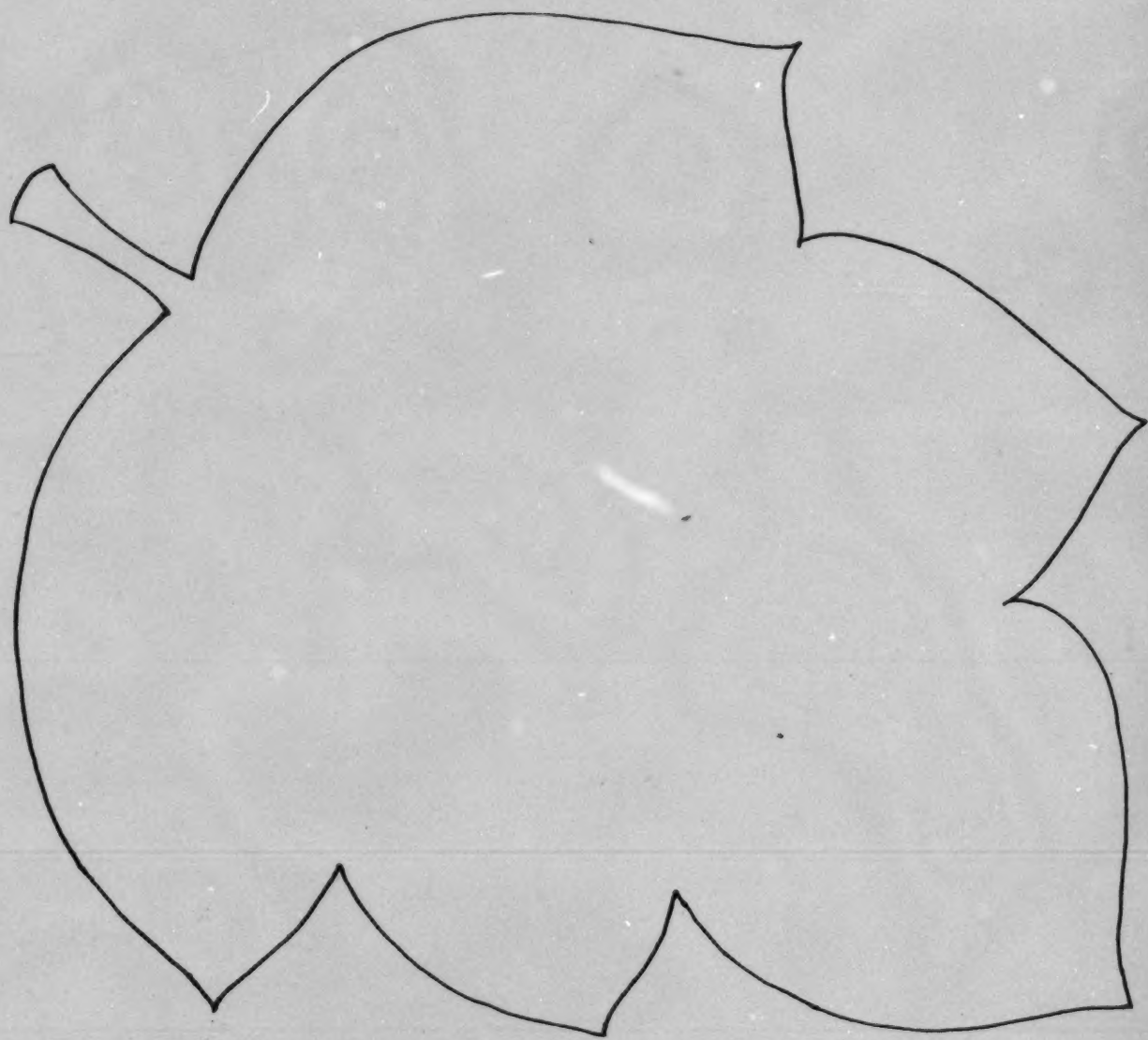


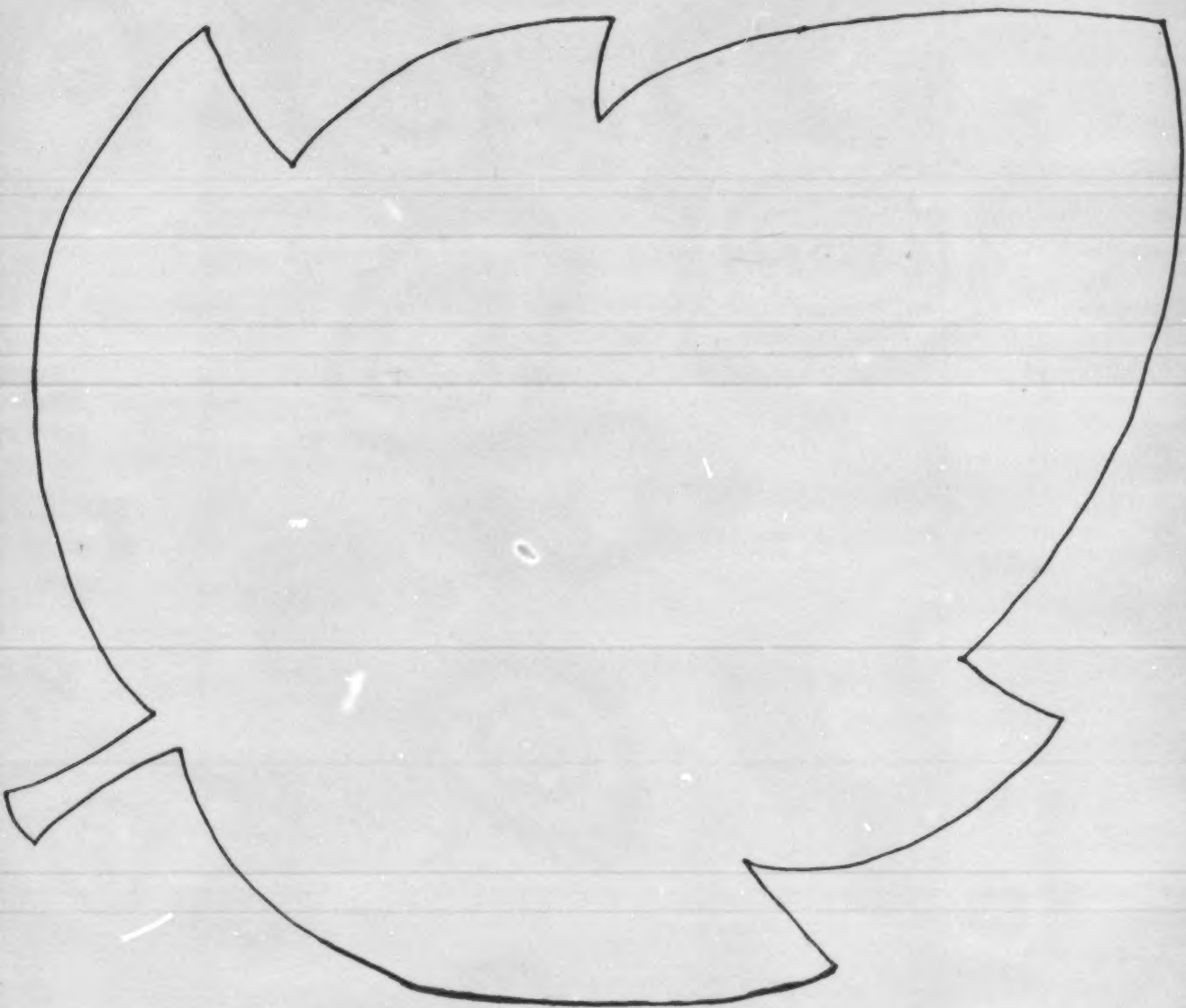
Field Trips

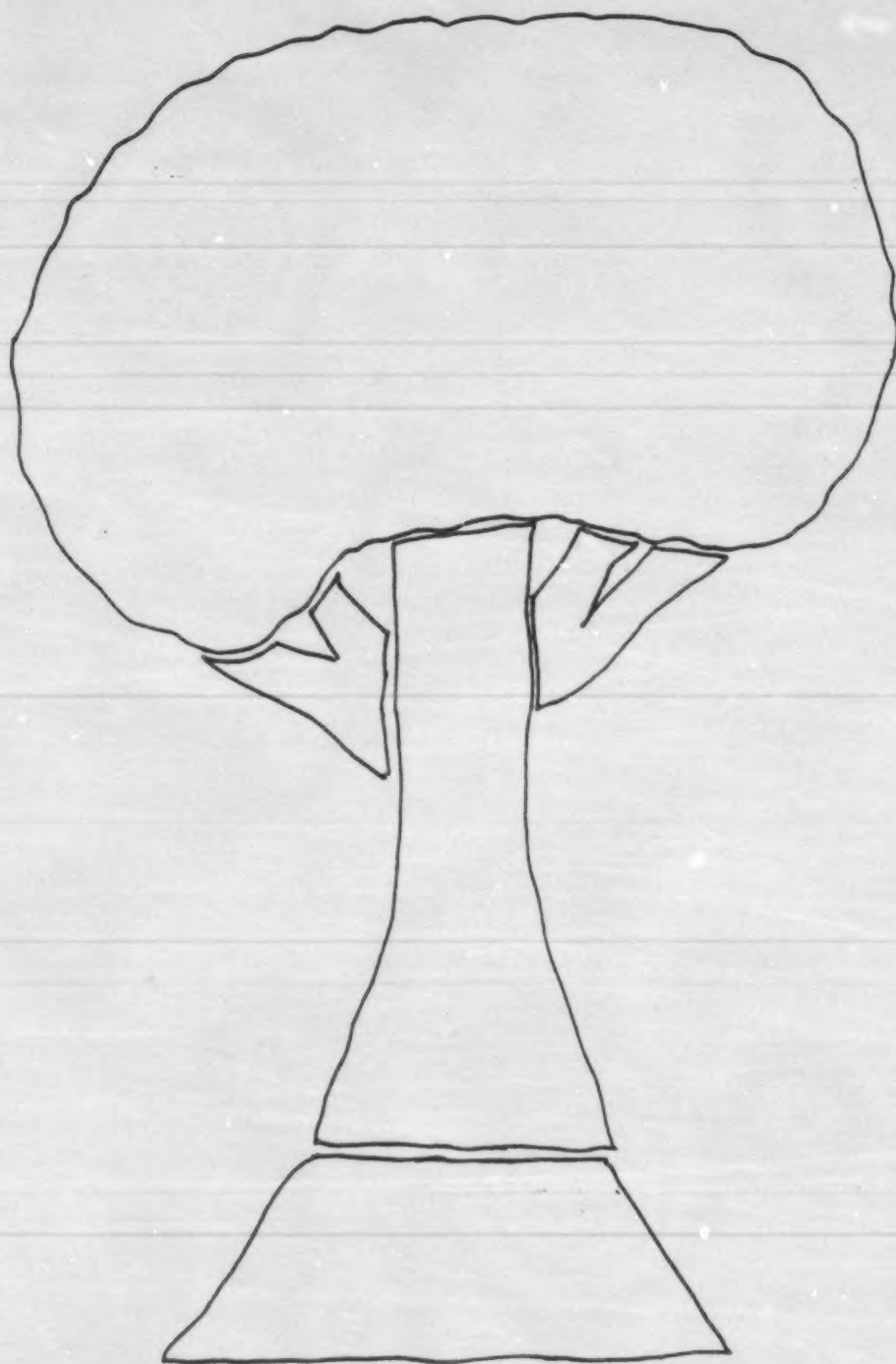
- Visit a tree or plant nursery and look at different plants and trees.
- Tour a local greenhouse to see how different plants can grow off season.
- Tour a local lumberyard to see how wood is made. Look for many different kinds of wood and try to figure out the different uses of various woods. For example, what kind of wood would you use to build a bookcase, or for the walls on a house? What are the uses for sawdust, wood chips, and bark-o-mulch?
- Visit a local park or forest to look for different kinds of trees. Have children look for the biggest, fattest, prettiest, silliest, and skinniest tree at the park. Ask the children to find their own favorite tree. When you return from the park, have them draw a picture of their favorite tree and tell what about the tree makes it special to them.











Harvest

27

The Harvest theme evolved as an extension of trees and plants. This theme was planned to show to the children by-products of trees and how these by-products can be useful to us. As with other sections of this book the order of the activities is arbitrary.

In this section we present the cooking projects first since cooking was the main focus of the Harvest theme. Here are some general tips for all cooking projects.

1. Plan ahead-Have all ingredients ready and available before you begin the project.
2. Work in small groups- This offers all children the opportunity to take turns in the project.
3. Break up jobs- For example, if a recipe calls for one cup of flour, split that into 1/4cup measures. This way the children begin to learn measures and four children get a turn instead of just one child.
4. Extra adults- If you are working with more than four children it is helpful to have another adult assisting with the project.
5. Rotate children- Some projects (such as peanut butter, or apple sauce) can be large group projects for an entire class. Have the children take turns shelling and chopping. It is helpful to have another activity in another room so children are occupied while waiting for a turn.



"These are clouds and
a garden with all dif-
ferent pictures."
Amy Davis
Age 5

28 Applesauce

This is a great project to follow up a trip to an apple orchard or a produce stand where the children have picked out their own apples. "Windfall" apples (apples that are bruised from falling on the ground) are good to use for this project. They are usually cheaper than other apples and taste great.

Ingredients:

- apples (each child should cut at least one)
- cinnamon
- honey (usually apples are sweet enough without honey)
- dull kitchen knives
- large stirring spoon
- large cooking pot
- food mill or strainer

Helpful Hints:

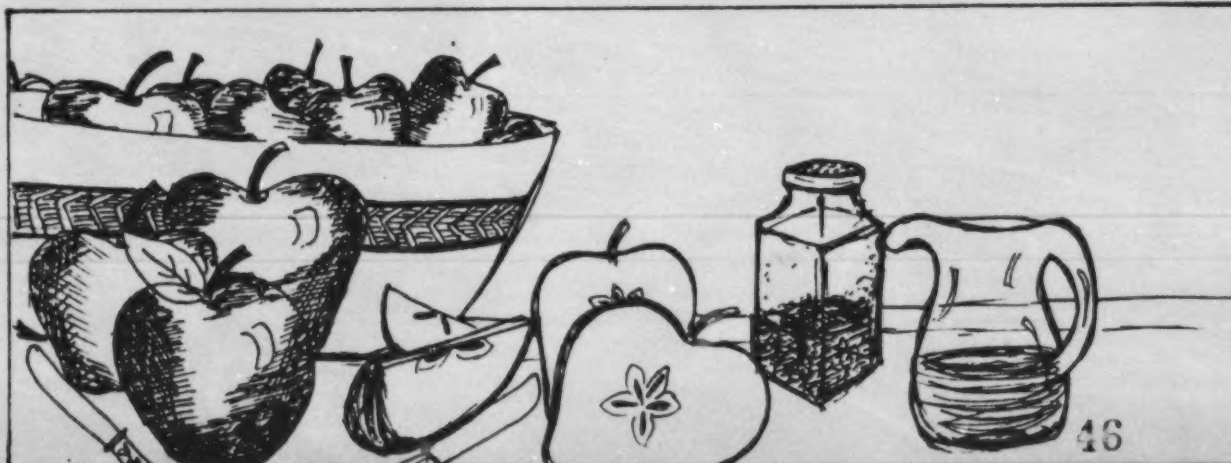
- When working with young children, it is helpful to cut and core apples in quarter pieces. The children can then cut these pieces into smaller chunks.
- Have extra apples for children who want to cut more than one.

Variations:

- Try other fruit sauces such as pear, peach, banana, etc.

How to do it:

1. Cut the apples in small pieces.
2. Take out the cores and seeds; leave the skins on.
3. Put in a pot with some water (about 1-2 inches on the bottom of the pot).
4. Cook over a medium heat until the apples are soft (about 20-30 minutes).
5. If you have a food mill mash the apples through and throw out the skins. If you are using a strainer simply mash apples through with a spoon or ladle.
6. Add cinnamon or honey to taste.
7. Eat when warm- it's yummy!



Homemade Peanut Butter

29

Ingredients:

- shelled peanuts (1-2lb)
- unshelled peanuts (1lb)
- some honey(not more than 1/2cup)
- some oil (about 1/4cup)
- food mill, meat grinder, coffee grinder, blender (any of these will work; however a meat grinder is the most fun to use!)
- bowls for shells and peanuts
- crackers to eat with peanut butter
- spoons for stirring and mixing

Helpful Hints:

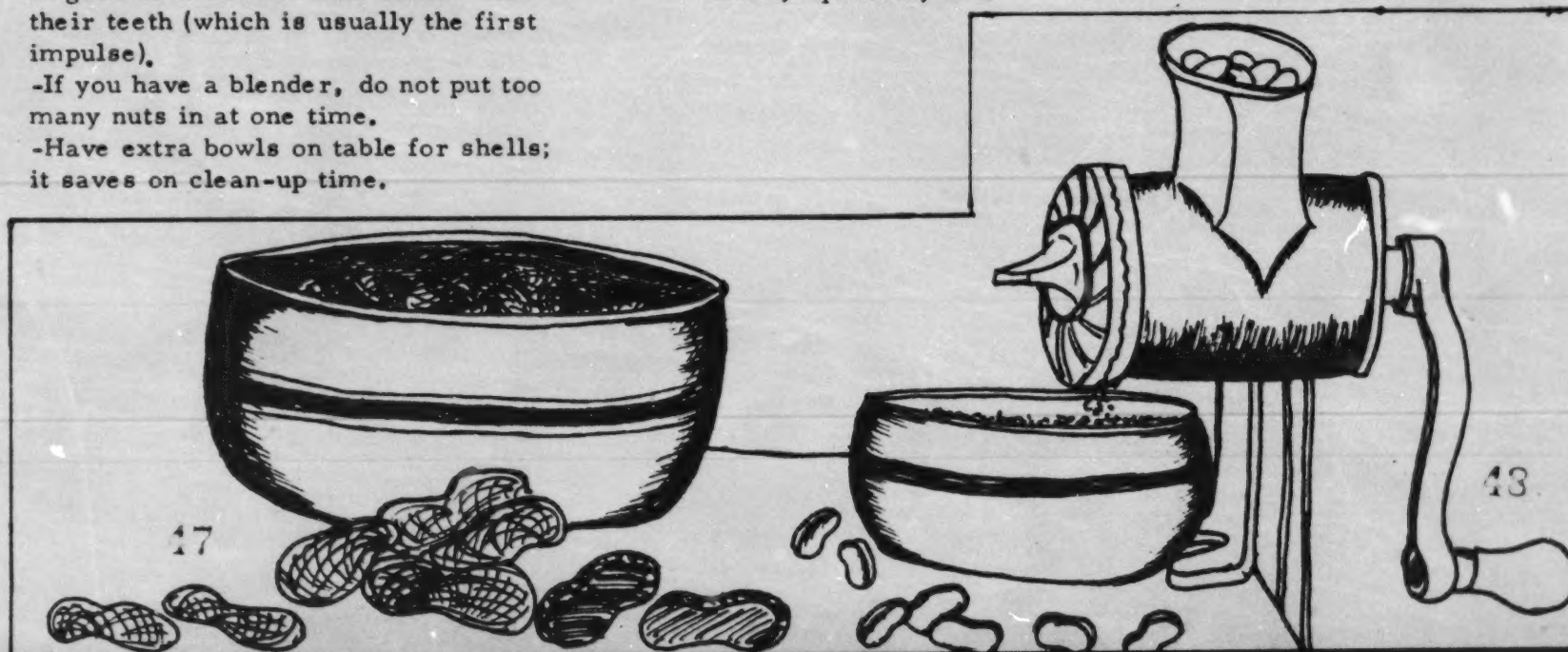
- If your group is primarily young children(2-4), you may want to have more shelled than unshelled nuts. However, shelling peanuts is a good fine motor activity for young children.
- Encourage the children to use their fingers to break the nuts rather than their teeth (which is usually the first impulse).
- If you have a blender, do not put too many nuts in at one time.
- Have extra bowls on table for shells; it saves on clean-up time.

How to do it:

1. Attach meat grinder to table. If it's possible, have the children try to do this and figure how the machine works.
2. Give the children peanuts and start shelling. Remind the children not to mix shells with nuts.
3. Put shelled peanuts in grinder and grind through. The mixture should be ground through several times.
4. After the peanuts have gone through the grinder, mix in honey and oil according to taste. Have children stir the mixture with big spoons.
5. Spread on crackers and eat!

Variations:

- Try other nut butters (almond, walnut, cashew).
- Experiment with different textures (chunky, creamy).
- Try adding different ingredients such as raisins, dates, apricots, etc.



Fruit Salad

Ingredients:

- apples, pears, peaches, bananas, pineapple, (any fruit that is in season or a favorite)
- nuts, raisins
- dull knives
- large mixing bowl
- stirring spoon

How to do it:

1. Have the children cut up fruit into small chunks.
2. Add nuts, raisins, and other dried fruits.
3. Stir and eat!

Helpful Hints:

- When working with young children (2-4), cut apples, pears, and core/pit them. Cut pineapple in large pieces for children to dice.
- Talk with the children about the different fruits,, Where they come from, the different colors, taste, smell, feel.
- Have plenty of spare bowls to aid in clean-up.

Fruit Smoothies

Ingredients:

- pears, peaches, bananas, pineapples, berries, etc.
- yogurt or kefir
- dull knives
- blender
- bowls

How to do it:

1. Have the children cut up fruit into small chunks.
2. Pour kefir or yogurt into blender. Add fruit and blend until smooth and creamy.

Variations:

- For a non-dairy smoothie add apple juice to any banana-fruit mixture.



Grinding Corn & Making Cornbread

31

If you have access to an electric food mill or a hand mill, grinding corn is a great activity for young children. However, if you don't have either of these gadgets then you can make corn bread with store bought corn meal. Corn bread is fun to make and great to eat.

Ingredients:

- whole dried kernal corn (not popping corn) 1lb should be enough to make 2 cups of corn meal
- food mill
- 2cups flour
- 1/4cup honey
- 8tbs baking powder
- 2 eggs
- 2 cups milk
- 1/4 cup butter or margarine

Variations:

- Grind wheat berries into flour and make whole wheat muffins.
- Grind old bread into breadcrumbs.
- Grind beans and use them in a stew.

How to do it:

1. Pour a small handful of corn into the food mill. Grind for about 1 minute.
2. Mix other ingredients with a hand mixer until blended smoothly. Add ground corn meal.
3. Grease 2 8"square pans or any other size that is equivalent.
4. Bake at 425 for twenty minutes.

Helpful Hints:

- As with any cooking project, let the children have equal turns pouring, mixing, and measuring.
- Corn bread can dry out quickly. Avoid this by covering the bread with melted honey butter when it is warm.



Thanksgiving Feast

As part of our Harvest unit we decided to prepare a Thanksgiving feast for the parents and children at Amazon. Since our school serves only vegetarian meals we planned our own nontraditional Thanksgiving feast.

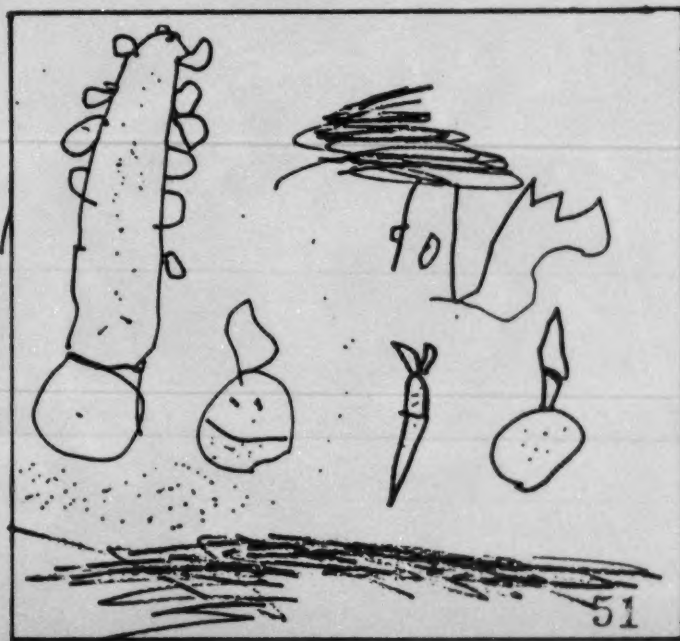
Our Menu

Vegetable Stew
Whole Wheat Muffins
Cheese Cubes
Homemade Butter
Tofu Pumpkin Pie
Fresh Apple Cider

The meal took three days to prepare; however, we were working at our own pace; your time may differ depending on how many children, their ages, and the number of adults helping to prepare the feast. At any rate leave enough time so that you do not feel rushed. The preparation was a lot of fun for our children; they felt very good about preparing a whole meal for themselves and their parents.

The stew recipe was taken from the Moosewood Cookbook. The pie crust and muffin recipes come from the Tassajara Bread Book.

"This is a carrot, it's already grown, but nobody picked it. This is a pumpkin and the purple kind of lettuce."
Danny Sherman
Age 5



Ingredients:

- 4 onions sliced
- 3 cloves garlic
- 4 potatoes
- 6 carrots
- 4 stalks celery
- 2 eggplants
- 4 medium zucchini
- 2 stalks fresh broccoli
- 6 fresh tomatoes
- 1/2 lb mushrooms
- 1 small can tomato paste
- 6 tbs molasses
- 1 tsp dill weed
- salt, pepper, oregano, basil to taste
- dull knives
- large cooking pot

Variations:

- Use whatever vegetables are in season or are favorites among the children.
- This recipe can be doubled or cut in half depending on the group size. This recipe served 20 children and 10 parents.

How to do it:

1. Steam potatoes so they are soft for the children to cut.
2. Have the children cut the vegetables in small chunks.
3. Saute onions, garlic, potatoes, eggplant in oil or butter.
4. When the potatoes are tender add other vegetables to a large pot along with molasses and tomato paste. You may also need to add some water to avoid burning the vegetables.
5. Cover and cook over a medium heat for twenty minutes. Season to taste.

Helpful Hints:

- Have the children work in small groups and have each group work on different vegetables.
- Adults should cut onions and garlic as children often don't like the smell. However, encourage children to take a quick smell so that they can learn how onions and garlic smell.
- When seasoning the stew have children smell the different seasonings. Ask them which they like or dislike. Have them describe the different smells.
- If you have a crock pot the whole mixture can cook in the crock pot for several hours.



34 Pumpkins

In the Fall pumpkins are plentiful. Take advantage of this and experiment with these different recipes and activities. Most children love the idea of cooking a pumpkin, as it enhances the excitement of Halloween. Children can also learn that there are uses for pumpkins other than "jack-o-lanterns".

Cooking a Pumpkin

Ingredients:

- pumpkin
- sharp knife (for adult use only)
- large cooking pot

How to do it:

1. Cut open the pumpkin with a sharp knife.
2. Have the children scrape out the insides and separate the seeds from the pulp.
3. Cut the pumpkin into 3-5inch pieces, or bigger if you want. The pieces must be able to fit into the cooking pot.
4. Put the pumpkin in the cooking pot with 1-2inches of water on the bottom.
5. Cook for twenty minutes over a medium heat. The pumpkin should be soft and mushy when fully cooked.
6. When the pumpkin has cooled, have the children peel off the skin.
7. Mash the cooked pumpkin with spoons, and masher, or blend until smooth.

Pumpkin Seeds

Ingredients:

- pumpkin seeds separated from pulp
- baking sheet
- oil
- salt

How to do it:

1. Oil baking sheet.
2. Spread seed on the sheet and salt lightly.
3. Toast in the oven stirring occasionally.
4. Eat when warm!!

Helpful Hints:

- Be careful with young children as they could choke on the seeds. Open the seeds for younger children to avoid this problem.

Variations:

- Toast other squash seeds (acorn, butternut, spaghetti, etc.) and compare the different tastes.
- Cook other kinds of squash and choose a favorite.



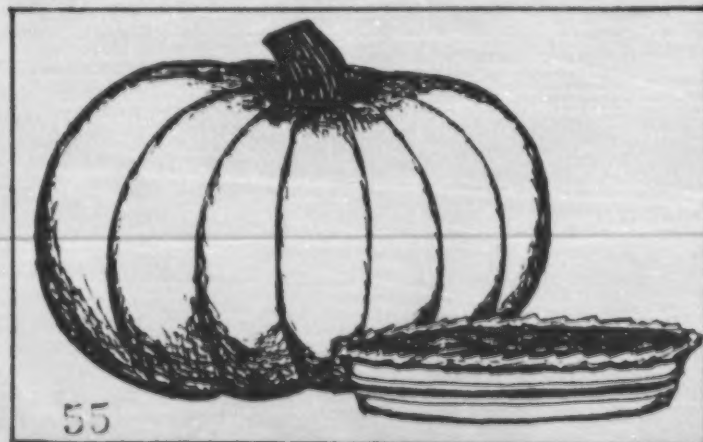
Pumpkin Bars

Ingredients:

- 1/2 cup butter or margarine
- 1 cup brown sugar
- 1 egg
- 1/2 cup cooked pumpkin
- 1&1/2 cup flour
- 1tsp cinnamon
- 1/2 tsp ginger & allspice
- 1/2 tsp baking soda
- 1/2 cup raisins
- 1/2 cup chopped nuts (walnut, pecans)

How to do it:

1. Cream butter and sugar.
2. Add egg and pumpkin. Continue mixing until smooth.
3. Sift flour and mix with spices and baking soda.
4. Add dry mixture to pumpkin mixture.
5. Stir in raisins and nuts.
6. Grease a 11x16" pan.
7. Pour mixture into pan and bake at 350 for 15-20 minutes.



Tofu Pumpkin Pie

35

Ingredients:

Filling:

- 1&1/2 cups cooked pumpkin
- 1lb tofu
- 1/2 cup honey
- 2 tsps cinnamon
- 1tbs vanilla
- 1 tsp nutmeg

Crust:

- 1 cup flour
- 1/2 cup oil
- 1/2 tsp salt
- 1/2 cup water

How to do it:

1. Mix flour and salt with oil, adding a small amount at a time.
2. Continue stirring with a fork while adding water until dough clings together.
3. Knead lightly. The dough may be rolled out immediately. Roll dough and put it in a 9" pie pan.
4. Blend pumpkin, tofu, honey, cinnamon, vanilla, and nutmeg in blender or with a mixer until the mixture is smooth and creamy.
5. Pour into pie shell and bake at 350 for 45 minutes.

Helpful Hints:

-After the dough is rolled out give each child a small piece of dough to make a tart. The tarts can be made in muffin tins. Children usually love this idea as they get their own little pies.

36 Homemade Butter

This recipe started off to be whipped cream for our pumpkin pie, however, it was in the blender for too long and became butter-which was delicious!!!

Ingredients:

- heavy cream
- blender or hand mixer
- food coloring if desired
(we made blue butter!)

How to do it:

1. Pour cream into a blender (or a bowl if using a hand mixer).
2. Blend or beat until it is at the right consistency. Usually 5 minutes for whipped cream and 10-15 for butter.
3. Add coloring if you want to.

Variations:

- Children can also use a small milk carton or jar with about 2-3tbs of cream. Have the children shake the jar for 5 minutes.

Whole Wheat Muffins

Ingredients:

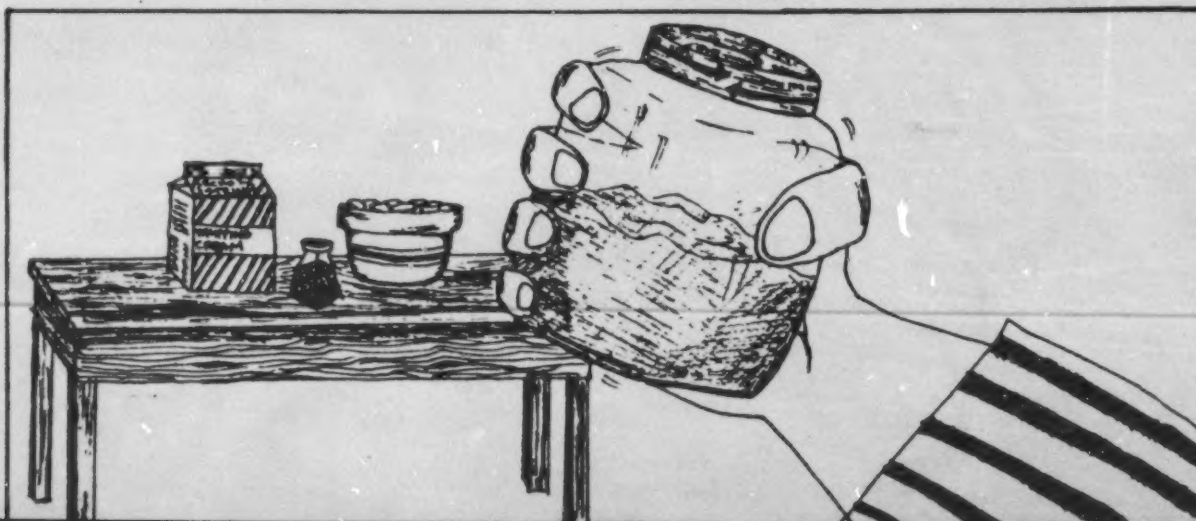
- 2 cups whole wheat flour
- 2 tsps baking powder
- 1/2 tsp salt
- 1 egg
- 1/4 cup oil
- 1/4 cup honey
- 1&1/2 cups milk

How to do it:

1. Sift flour and combine dry ingredients
2. Mix egg, honey, oil, and milk until smooth and creamy.
3. Mix wet and dry ingredients together.
4. Grease muffin tin and spoon in mixture.
5. Bake at 350° for 20 minutes.

Variations:

- Add nuts and raisins.
- Use 1 cup white flour and 1cup whole wheat for a lighter muffin.



"Where Food Grows" Mural

37

Age range: 2-5

of children: 5-10

Ingredients:

- crayons
- roll paper, newsprint works best
- magazine pictures of different kinds of food
- glue



Variations:

- Make a "where things live" mural for an animal unit.
- Have the children draw pictures of different fruits and vegetables rather than use magazine pictures.

How to do it:

1. Cut a piece of paper about 6ft long (or however long you would like your mural to be).
2. Have the children color the bottom of the paper brown (to represent ground or dirt), color above the ground green (to represent grass or a place for trees and above ground plants), and color blue for the sky.
3. Have the children glue the pictures of the foods according to where they think they grow.

Helpful Hints:

- Cut out pictures from magazines in advance when working with younger children. Older children may want to look through magazines to find their own pictures.
- Work with small groups so as to avoid congestion, or make two different murals. It is important to give children enough space to work.
- Rotate children so that each child gets a turn to participate in the project.

Corn Collage

Ingredients:

- yellow construction paper
- glue
- newspaper for table
- assorted corn (dried, popped, cracked, indian)

How to do it:

1. Pre-cut yellow paper into "corn-ear " shapes to resemble an ear of corn.
2. Put assorted corn in pans or trays.
3. Have the children spread glue on the paper corn-ears and glue the assorted corn on them.
4. Talk with the children about the different kinds of corn. If possible bring in a picture of a corn plant so that the children can see how corn grows.

Variations:

- If you are working with older children, have them cut the corn shapes out. You can trace them on the paper and the children can cut out the corn shapes.



Bean & Seed Collage

of children: 5-10

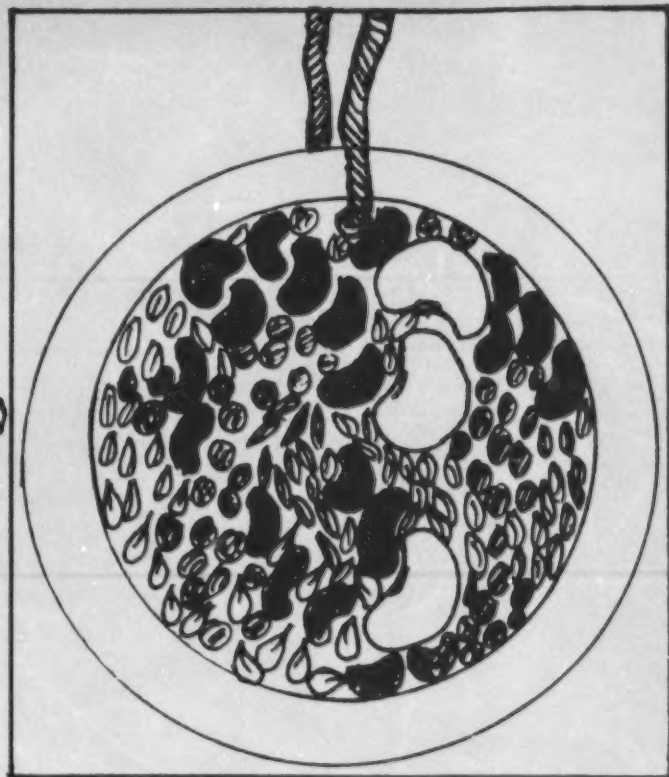
Age range: 2-5

Ingredients:

- glue and dishes for the glue
- paper
- popsicle sticks for gluing
- newspaper for table
- assorted dried beans (soy, kidney, navy, etc.)

How to do it:

1. Spread newspapers on the table and give the children paper for gluing.
2. Put the beans on the table in bowls, tin pans, or whatever dish you have.
3. Put glue in dishes and have the children spread glue on their papers.
4. Have children create designs with the beans on their papers.



Helpful Hints:

- Use either light or dark black paper to contrast with the beans.
- This is a great activity for very young as well as older children, as the collages can become as sophisticated as the children want them to be.

Variations:

- Collages can be made from any material such as fabric, styrofoam, paper scraps, old greeting cards, etc.
- To create a more sophisticated activity for older children, ask children to glue beans on lines (pre-drawn on paper). This is especially good for developing eye-hand coordination.
- Use plastic lids (soft drink, yogurt, salad dressing), to create an ornamental effect.

Books

Old MacDonald Had An Apartment House, by Judith Barrett

The Pumpkin People, by David and Maggie Cavagnaro

What is a Fruit, by Jenifer W. Day

Nuts, by Olive L. Earle

From Seed to Jack-o-Lantern, by Hannah Lyons Johnson

How a Seed Grows, by Helene J. Jordan

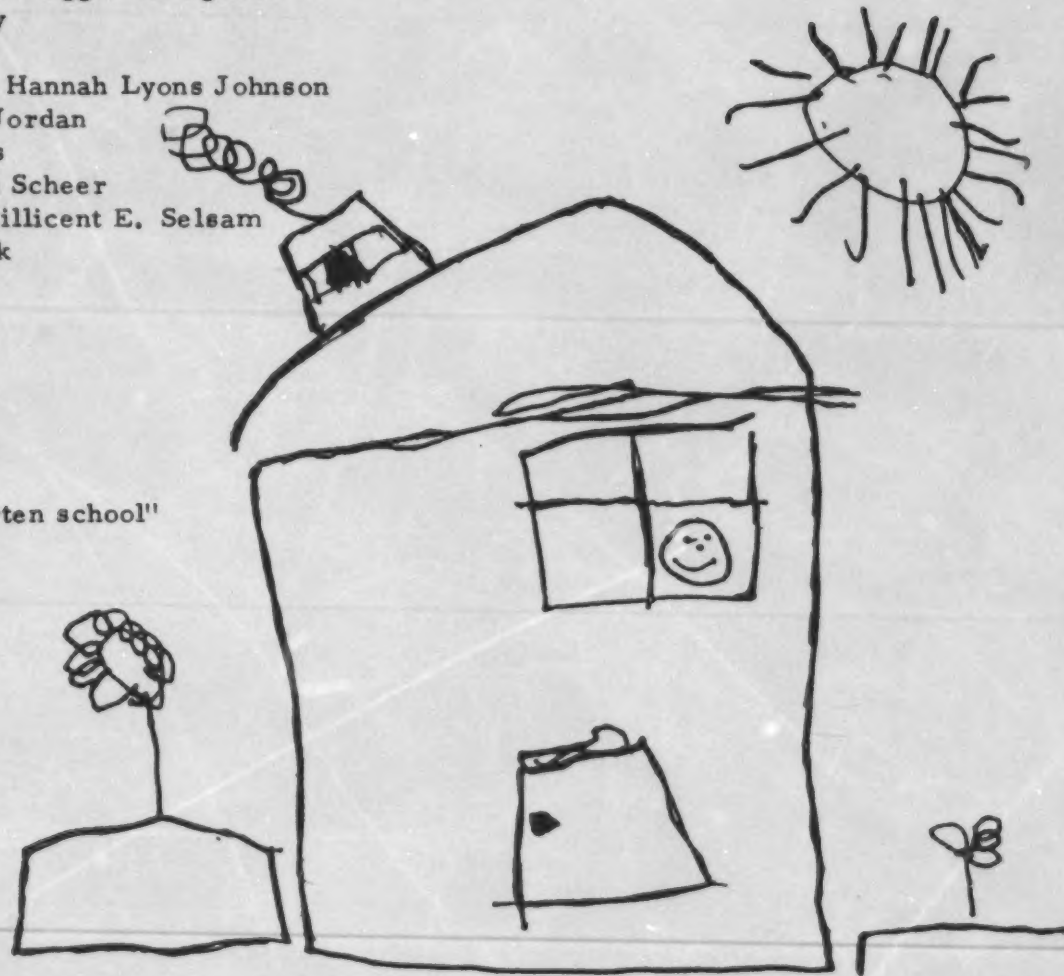
The Apple War, by Bernice Myers

Rain Makes Applesauce, by Julian Scheer

The Apple and Other Fruits, by Millicent E. Selsam

Pumpkin Seeds, by Steven Yeaback

"My kindergarten school"
by Amy Davis
Age 5

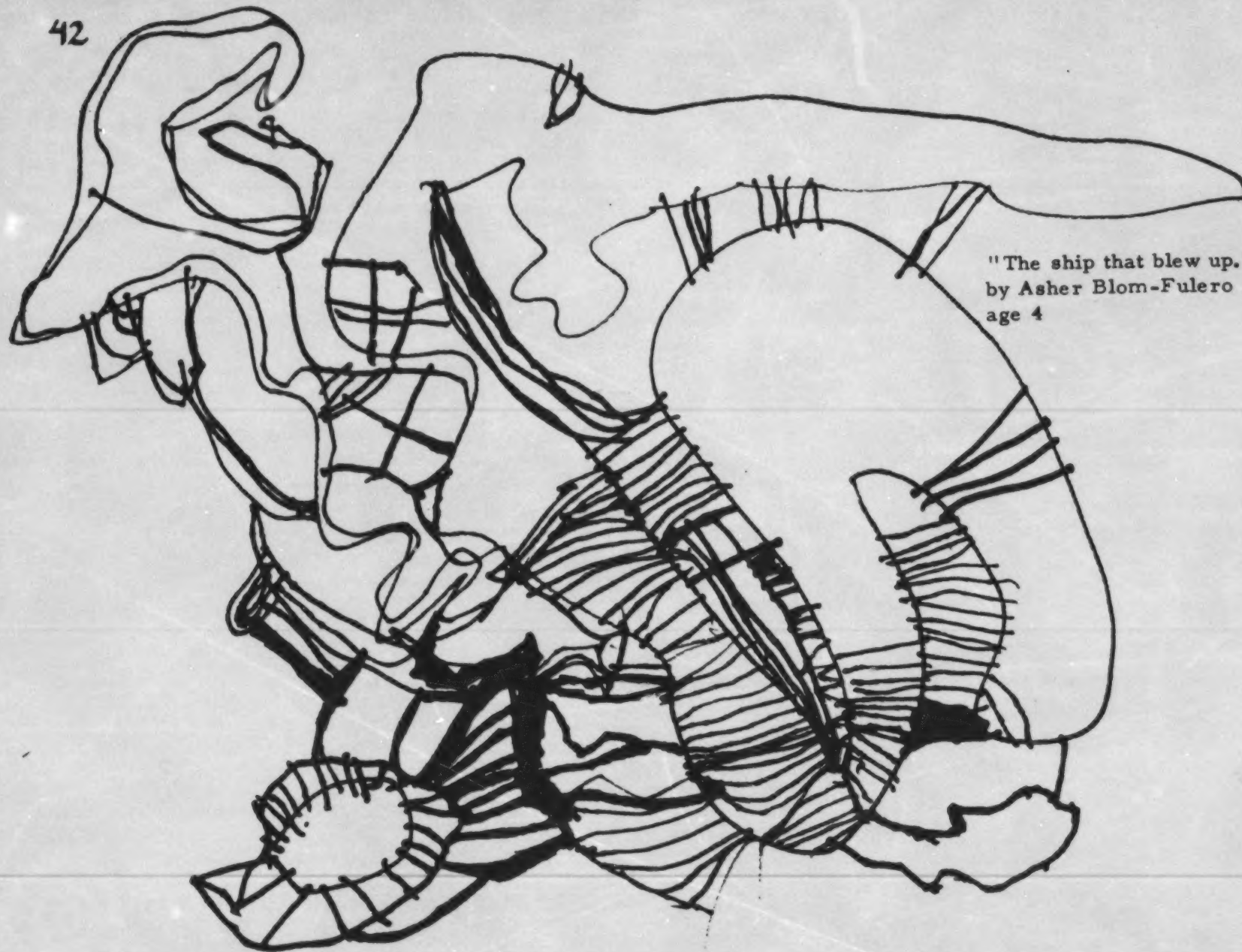


Field Trips

The Harvest unit offers a variety of field trips for both city and country environments. Plan ahead, as many schools take trips in the Fall and many places may be crowded. If possible, take some trips in the middle of your unit; then come back to school and do some of the activities. In doing this you will reinforce what the children have seen on the trip.

1. Visit an apple orchard and perhaps go apple picking. Many orchards will allow groups of children to visit and pick their apples. Some are free and some require a minimal charge for the apples. For a trip like this be sure that the children dress appropriately (ie warm clothes and boots as it is often muddy in Fall.)
2. Pumpkin patch- This is similar to an apple orchard and they are sometimes at the same location.
3. Visit a neighbor's garden to see what kinds of things people can grow in their own yard.
4. Take a trip to a cider press to see how fresh cider is made.
5. Go to a grocery store that has a lot of fresh produce on display. If possible, visit a large supermarket and also a small grocery or health food store to have children make comparisons.
6. Visit a bakery to see how breads and other baked goods are made. Again, visit two different bakeries (large supermarket bakery and small bakery) to offer comparisons and differences.
7. Grain Mill- Perhaps your town has a Grain Mill that you could visit to see how whole grains are processed.





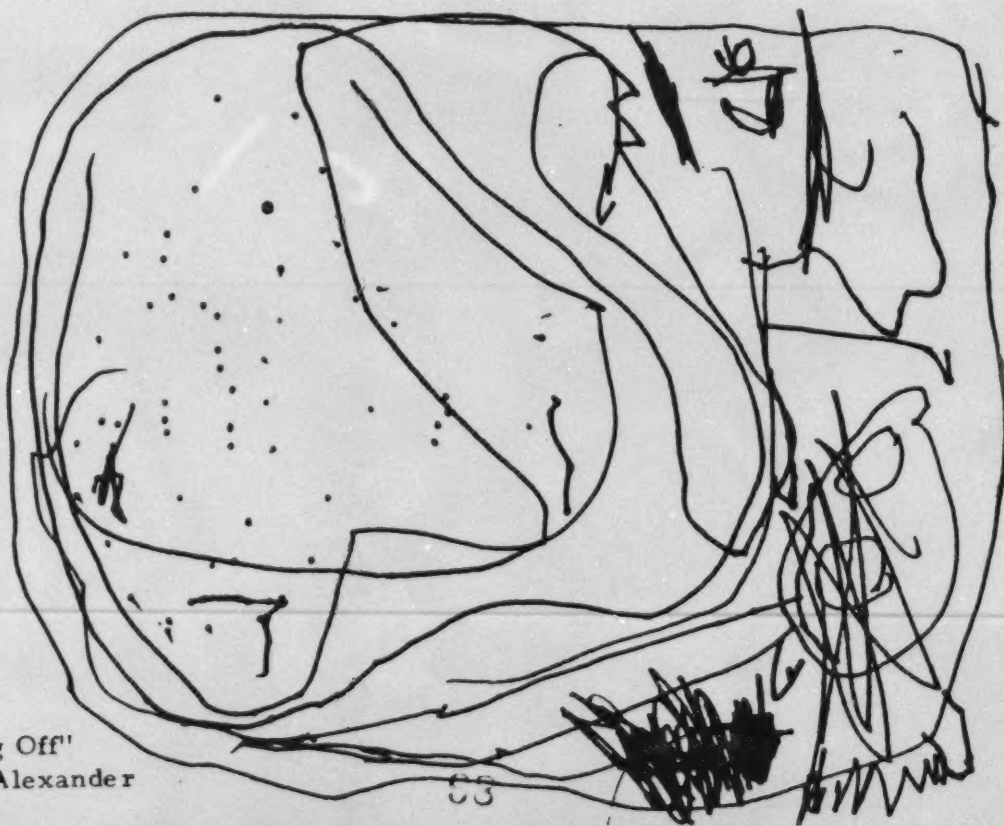
"The ship that blew up."
by Asher Blom-Fulero
age 4

Energy

What is energy? Where does it come from? These questions are asked often by children and adults. While the concept of energy can be complex and confusing, the principles behind energy are basic enough for young children to understand. For example, flying kites shows children how the power of the wind can be used as energy.

Through the study of energy, we hope to create an awareness among children about its importance. We want to show children the value of safe energy and how to preserve it. In addition, we want children to be aware of the importance of conserving energy. This can be done by reminding children of things they can do at school or at home to conserve, such as turning off lights when a room is empty, or keeping windows and doors closed on a cold winter day.

If we can create an energy awareness among young children, they can come to understand the complexities of energy as they mature and develop.



"Blasting Off"
Gabriel Alexander
Age 3

44 Moons

Age range: 3-6

of children: 5-6

Ingredients:

-black and white construction paper

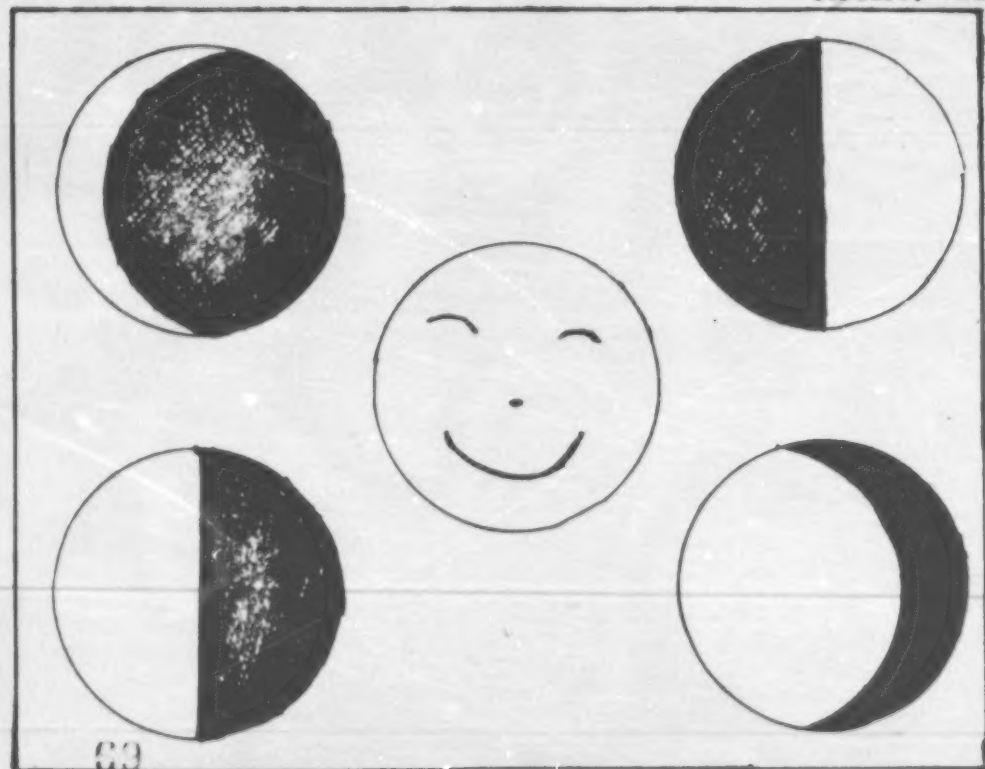
-glue

-scissors

How to do it:

1. Before beginning, draw 5 circles on each piece of white construction paper or recycled computer paper. On the black paper, draw the same sized circles and cut them out. Two black circles are needed for each child. On the black circles, draw a line dividing one in half. Then on the other, draw a line dividing it into 1/4 and 3/4 pieces. Don't cut these out. Let the children cut them at project time.

2. Give each child one white sheet and two black circles. Have the children cut the black circles into halves and quarters. Let the children glue these on the white circles. You can outline where the black sections go on the white circles. The other remaining circle is called the full moon. Have the children draw a face or whatever they want on the full moon.



Helpful Hints:

-Before the project, you can ask the children what they know about the moon. You can tell them how the moon seems to be getting bigger (waxing) or getting smaller (waning) every day. You can explain why this happens, (part of the moon is shaded and part of it is reflecting light).

-By using the dark sections of the moons to cover the white full moons, the children can see that the moon is always completely there but only the white reflected part can be seen.

-Discussions can also center on the energy that the moon exerts on the water on our planet which causes the rise and fall of the tides.

-While many of these concepts may seem complex for young children, exposure to the idea of the moon and its energy is an important concept to learn about. Discussions can be simple or complex depending upon the age group of the children.

Assemble-A-Sun

45

Age range: 2-6

of children: 5-6

Ingredients:

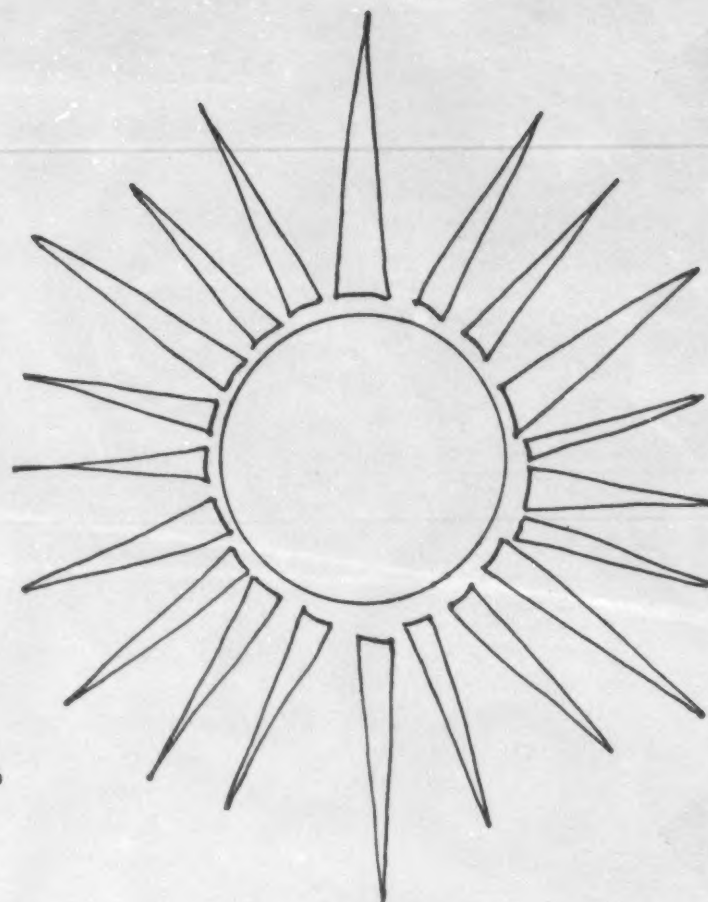
- white, red, and yellow construction paper
- scissors
- glue
- crayons or markers

How to do it:

1. Before beginning, draw a large circle on the white paper. On the red and yellow paper draw different sized triangles. (see pattern guide at end of chapter)
2. Give each child a piece of white paper with a circle on it. Next, give out some of the red and yellow triangles to each child along with a pair of scissors.
3. Have the children cut out the triangles and glue them around the circle to make a sun.
4. Have crayons or markers on the table for the children to draw a face on their finished sun if they want to.

Helpful Hints:

- Before the project, talk to the children about the power of the sun and how it helps plants, animals, and even people.
- Explain how the sun can be both beneficial (heating homes, drying fruits and vegetables) and dangerous (droughts).



Sun Tea

Age range: 2-6

of children: 5-10

Ingredients:

- large glass jar with lid
- tea bags or mint leaves
- cold water

How to do it:

1. Fill the jar with cold water. Have the children feel the temperature of the water.
2. Put the tea bags in the jar.
3. Set the jar in strong sunlight.
4. After about 2-3 hours have the children again feel the water. The water in the jar will be warm and tea will be done.
5. Chill the tea or serve with ice. You might want to add some honey, as children often do not like the taste of tea.

Helpful Hints:

Ask the children some questions about the sun tea.

- What made the water warm?
- How else can you make tea?
- Could you use the sun to cook other things?



Variations:

- Try melting butter or margarine in the sun.
- Make bread dough and set it to rise in the strong sunlight.

Solar Collectors

Age range: 4-6

of children: 5-6

Ingredients:

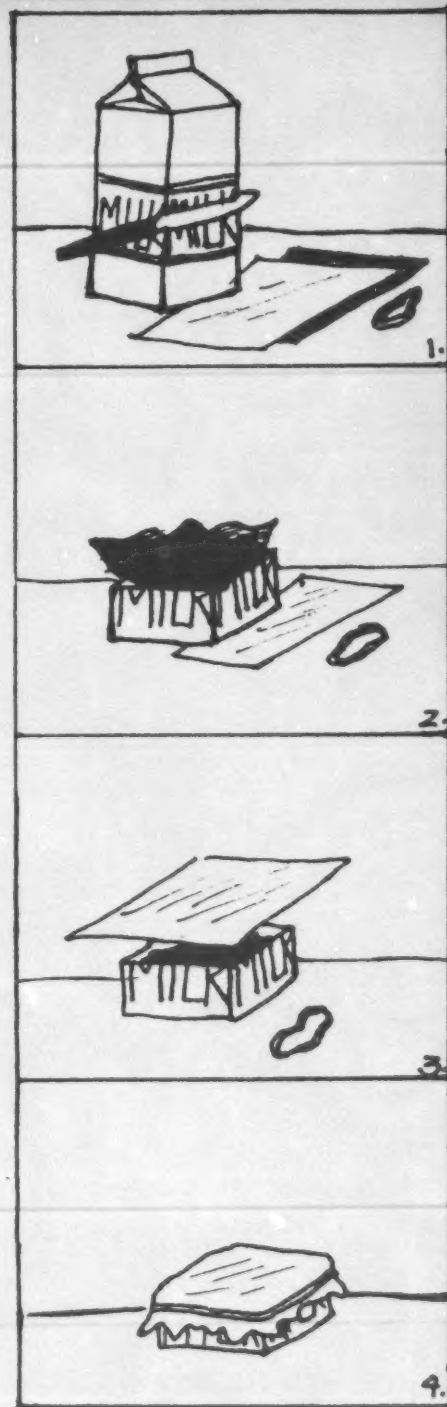
- milk cartons (half gallon size works best)
- black construction paper, (or paper towels and black paint).
- cellophane (cut into squares 2" larger than the milk carton on all sides)
- rubber bands
- glue

How to do it:

1. Before you start working with the children, cut the top half of the milk carton off, leaving a box of about four inches high.
2. Have the children line the bottom of the milk carton with black construction paper and glue it down. (If you are using paper towels, glue them in the box first and then paint them with black paint.)
3. Lay the cellophane over the top of the milk carton box. Wrap the rubber band around the top to hold it in place.
4. Put your solar collectors in a sunny window, and have the children check them periodically. After a short while the air inside the solar collectors should be warm.

Helpful Hints:

- Ask the children how they think that their house is heated.
- Help the children relate this to the idea of using solar collectors to heat a house, school, or other building.
- Relate the solar collector to the heat of an oven, by experimenting with its heat. Make honey butter by melting honey and butter together inside the solar collector.
- If you have made sun tea, ask the children if they see things that are the same. What heated the tea and the collectors?



Paper Airplanes

Age range: 2-6

of children: 6

Ingredients:

- white or colored construction paper
- crayons
- sticker, stamps
- stapler

How to do it:

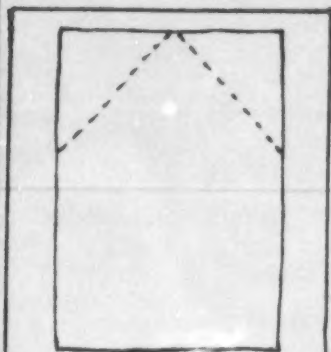
-Make an airplane for each child following these steps:

1. Fold the sheet of paper in half lengthwise.
2. Open it up as you do a book and fold the top half corners down toward the center making a point.
3. Close or fold it back to the lengthwise position and lay it on one side. Fold it again, but out towards you keeping the top as a point. When you fold, keep the bottom even. Now fold it a second time the same way. Do the same folds to the other side.
4. On the bottom of the airplane where you grip to sail the plane, staple 2 or 3 times to keep the plane from unfolding.
5. Hand out the crayons and stickers. Let the children write their names and numbers on the planes. Let them use their imaginations.

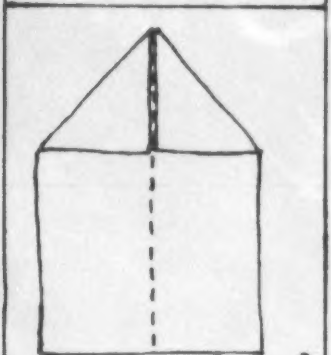
Helpful Hints:

-When working with younger children(2-3), the adult will need to do most of the folding. Older children (4-6) can do the folding if the adult is leading the activity. Be **sure** that the children are following each step as it is shown or this could become a confusing activity.

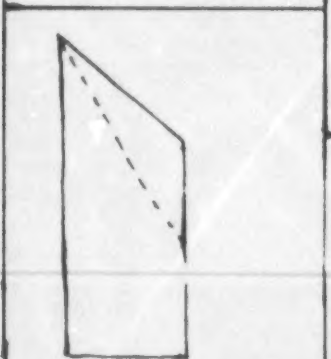
-Ask the children if they think that the wind helps or hurts their plane when they sail it.



1.



2.



3.



4.

70



5.



6.

Balloons

Age range: 2-6

of children: 5-10

Ingredients:

-balloons

-large play space

Helpful Hints:

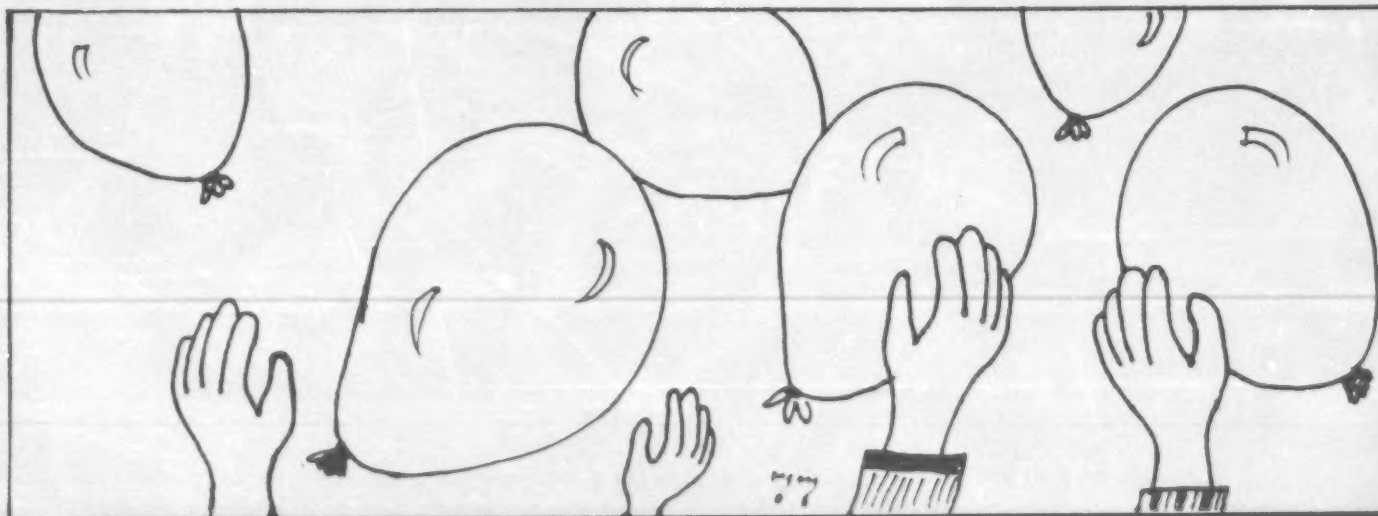
-Try to buy large balloons, they are easier for the children to hit and less likely to burst.

-Relate this to other activities which require different kinds of energy.

-Try playing the game with a plastic ball and compare which game was easier, which required more energy to keep in the air?

How to do it:

1. Blow up the balloons.
2. Give each child a balloon to throw into the air.
3. Challenge the children to try keeping the balloons in the air for as long as they can.
4. After a few minutes, ask the children: "Was it hard to keep the balloons in the air or was it easy?" Talk about how much work they had to do to keep the balloons in the air.
5. Now give each child 2 balloons and again have the children try to keep them in the air.
6. After a few minutes, ask the children if they had to work harder with 2 balloons rather than 1. Ask them how they know they worked harder: Are their muscles tired?
7. Talk to the children about their energy. Explain that they used a lot of their energy to play the game.



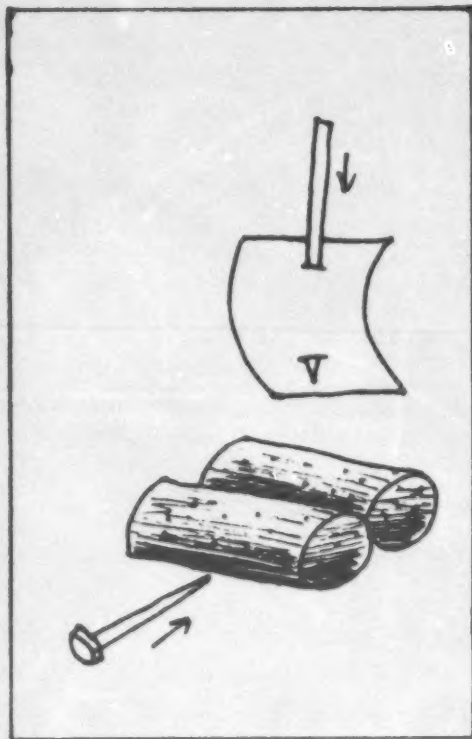
Cork Sailboats

Ingredients:

- bottle corks, or other cork material
- nails
- toothpicks
- colored paper scraps

Age range: 4-5

of Children: 5-6



How to do it:

1. Choose two corks (or the same amount of cork material) and lay them side by side.
2. Stick the nail through the side of the corks to hold them together. (The nail will also add weight to stabilize the "boat")
3. Stick the toothpick through the paper scrap and into the cork.
4. Set the sailboat in some water and blow on the sail to make it move.

Helpful Hints:

Try asking the children some questions about the sailboat,

- What made the boat move?
- Is the wind used as energy?
- How can we see the wind?
- Can you think of other things that use the wind to move?

Blowing Game

Age range: 2-6

of children: 4-5

How to do it:

1. Place the objects on the table spaced about 1 foot apart.
2. Have the children try to blow the objects off the table.
3. Talk about which objects are easier or harder to blow off the table and why. Are round objects harder than flat objects? Are light objects easier than heavy objects? Why? What makes the objects move?

Helpful Hints:

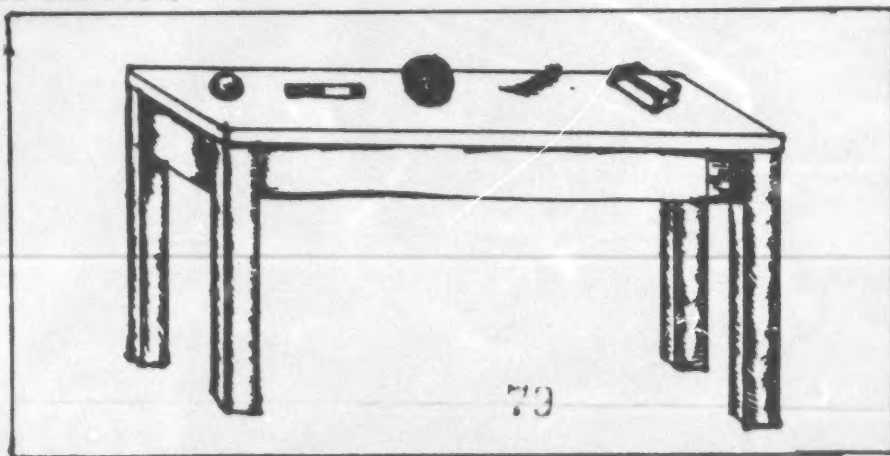
-Be sure that all of the children are blowing the objects in the same direction for this game.

Variations:

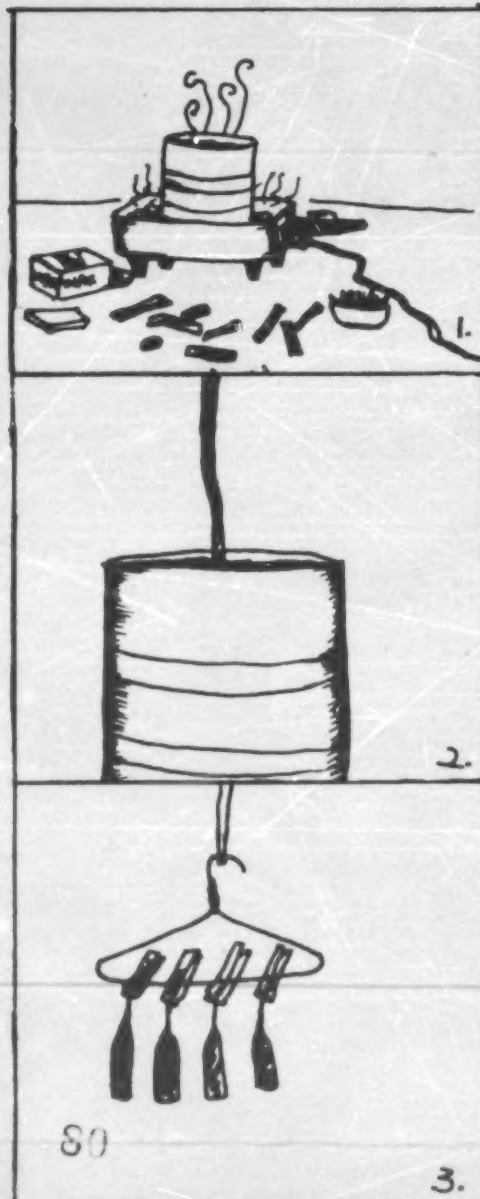
-For a different game, have the children blow the objects in opposite directions. Have two children on each end of the table and place a ball, for example, in the middle. The children will see how opposite forces can work.

Ingredients:

-a smooth surfaced table
-several objects of different shapes and weights (tennis ball, cotton ball, wooden block, stuffed animal, puzzle piece, etc.)



Age range: 3-6
of children: 4-5



Candles

Ingredients:

- candle wax
- 2 empty 16oz tin cans , 1 large coffee can
- candle wicks.
- coat hangers
- clothes pins
- broken crayon pieces

How to do it:

1. Before you begin, break up the candle wax into small pieces and set them into the cans. Place the cans inside of the large coffee can with about 3 inches of water in the bottom of the coffee can. Use a low heat. Add 5-6 broken crayon pieces into the cans of wax for color. Keep them on a low heat until they are melted and continue on a low heat until it is time for the project.
2. Cut the wicks to about 2 inches longer than the depth of the tin cans. Give each child a wick. Bring in the heated wax.
3. Demonstrate the process of dipping the wick into the heated wax, waiting for it to dry (have the children count to ten), and then redipping it.
4. The wax will form layer after layer on the wick. When the candle is between 1/2 inch and 3/4 inch in diameter at the bottom, it is ready.
5. Hang up the candles with the clothes pins on a hanger to allow the wax to harden. Put the children's names on the clothes pins to avoid confusion.

Helpful Hints:

- If the wax starts hardening while the children are dipping the wicks, place the can on the stove and reheat it until all of the wax is liquid again. Then let the liquid cool slightly and begin dipping again.
- The wax takes about 15 minutes to melt, so be sure to have enough time to prepare this project.
- Talk with the children about the uses of candles; how they can be used as a source of light or just to give a nice effect to a room.
- Mention the dangers of candles, such as starting a fire if they are used carelessly.

Drilling

53

Age range: 3-6

of children: 3 children with each adult

Ingredients:

- electric drill with 1/2inch bit
- hand drill with 1/2inch bit
- block of soft wood
- 1/2inch dowels
- hammers
- hand saw

How to do it:

1. If possible, work with an aide for this project. Have one adult helping with the electric drill and one adult helping with the hand drill.
2. Give each child his/her own block of wood.
3. Allow the child to drill 5 or 6 holes with the electric drill and 1 or 2 holes with the hand drill.
4. If you have enough help, let the children cut the dowels to length of about 2, 3, and 4 inches with the hand saw. If not, cut up the dowels before you begin the project.
5. Let the children hammer the dowels into the holes they have drilled

Helpful Hints:

- Pine and cedar are soft woods and will work well for this project; aged wood is usually very hard and difficult for the children to work with.
- Talk about the different kinds of energy that were used to operate the different drills. Ask the children which way they liked drilling the best and why.



Additional Activities

Mini Kites: Cut out kite shaped pieces of construction paper about six inches long. Attach a string and let the children run with them. Have the children decorate them with stickers, markers, glue, etc.

Paper Fans: Make simple paper fans by folding paper like an accordion. Have the children decorate them however they might want to. Show the children how to fan themselves. Talk about the wind and how it blows. How can we see the wind? How do we know it is there? Can we make our own wind even when it isn't blowing?

Blowing Bubbles: This is always a favorite activity for young children. If you add a few drops of glycerine to your bubble mixture, you can create large and colorful bubbles. If possible, try to blow bubbles outside so that the children can see how the wind carries them away. Have the children notice how the sun makes the bubbles look brighter and more colorful.

Kid Energy Mural: Hang a large piece of newsprint on a wall, either inside or outside. Choose any kind of art medium (chalk, paint, crayons, markers) and let the children create their own mural. Talk about the energy their bodies are using, especially their muscles. Help the children focus on how it feels after they have used up their energy during this activity. Talk with the children about how they can gain more energy when they are tired. This is a good time to make plugs for taking naps and eating well!

Make Your Own Alternative Energy, by Richard Gardner
Where Does the Sun Go at Night, by Mirra Ginsburg
Arthur's New Power, by Russell Hoban
The Sun, The Wind, The Sea, And The Rain, by Miriam Schlein
What the Moon Saw, by Brian Wildsmith

Field Trips

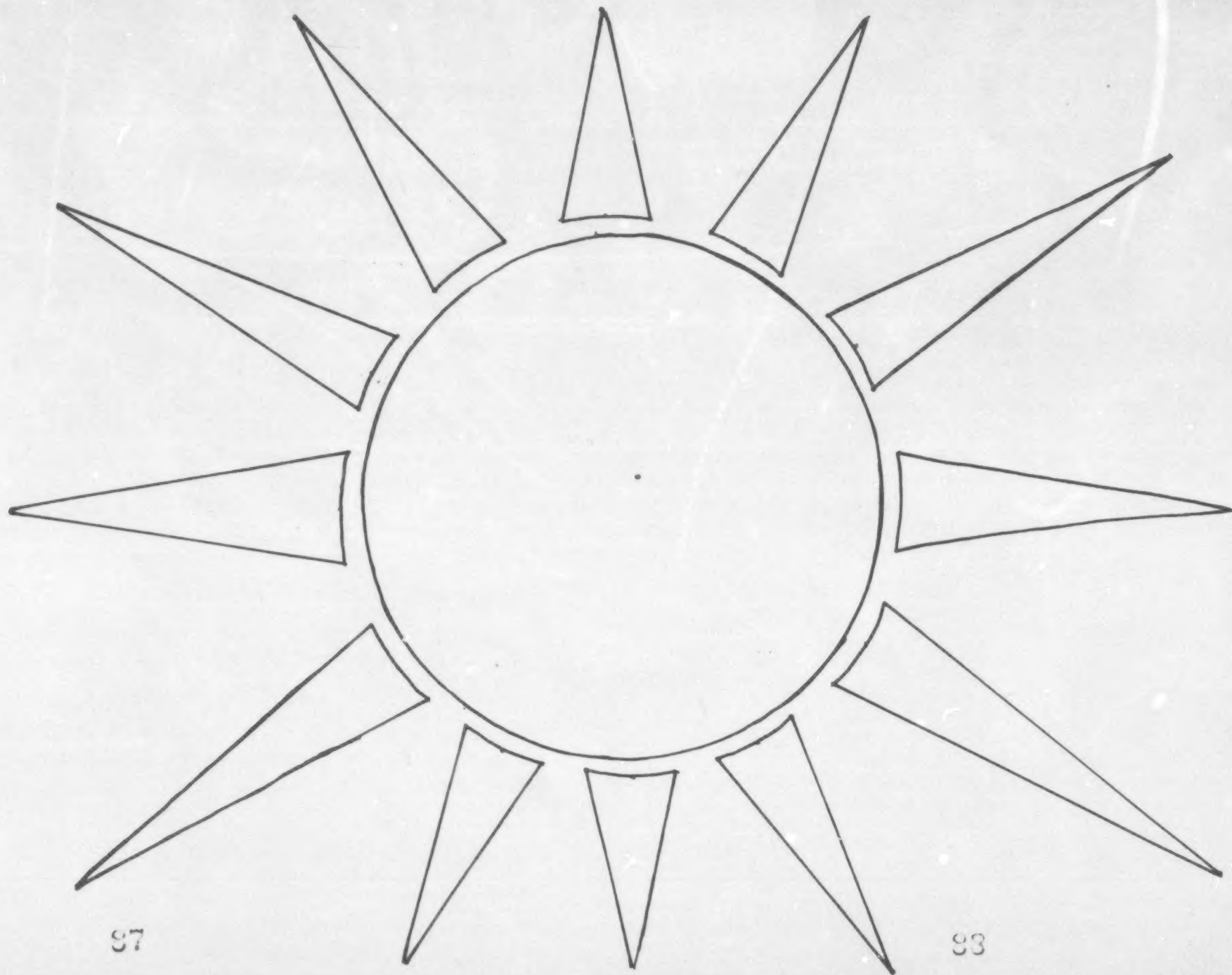
-Visit your local electric company. If you call in advance, you may be able to set up a tour of the facility. The tour can include demonstrations and observations and the children can see how electricity is made.

-If your town has a solar power company, try to arrange a visit. Perhaps there is a solar home in your area where the children could see how a home can be heated with the sun. Some toy stores have solar powered toys. This would be especially interesting for young children to see.

-Fly kites with the children. Go to a park that has an open field without wires in the way. Give the kite string to a child while you hold the kite upright. Have the child run into the wind until the kite starts soaring upward. Once the kite is up, you can let other children take turns holding it. Have them feel and see the pull of the wind and, after the trip, talk with the children about the wind and its power. Talk about the positive and negative aspects that we derive from it (sailboats and windmills, or tornados and ocean storms).

-Go to a park and build a campfire. Many young children tend to have a fear of fire and only see its negative effects. You can show children that a contained fire can be both useful and enjoyable. Bring something to cook over the fire. We brought pre-cooked potatoes and roasted them on sticks in the fire. The children enjoyed eating the potatoes dipped in melted butter.





Recycling

Recycling is an excellent theme for preschool teachers and parents to incorporate into their curriculum or daily activities. Through recycling we foster the idea that we do not have unlimited resources. We can help children to understand this idea by using scraps that might have become "garbage" in creative and educational projects.

Educationally, recycling offers opportunities to stress important skills such as classifying and ordering. When we sort our kitchen bottles, for example, children can learn how to form different categories of glass, such as brown, clear, and green. To extend this activity we can ask them to put the bottles in order according to size. Children enjoy grouping these ways and can learn educational skills while having fun.

Recycling is important today; if our children do not grasp its principles, it may not be important tomorrow.

"When I grow up, I'm going to be a pollution fighter like Jacques Cousteau. There's a lot of pollution in this world and we got to fight it!"

-Joseph Stipek, age 4



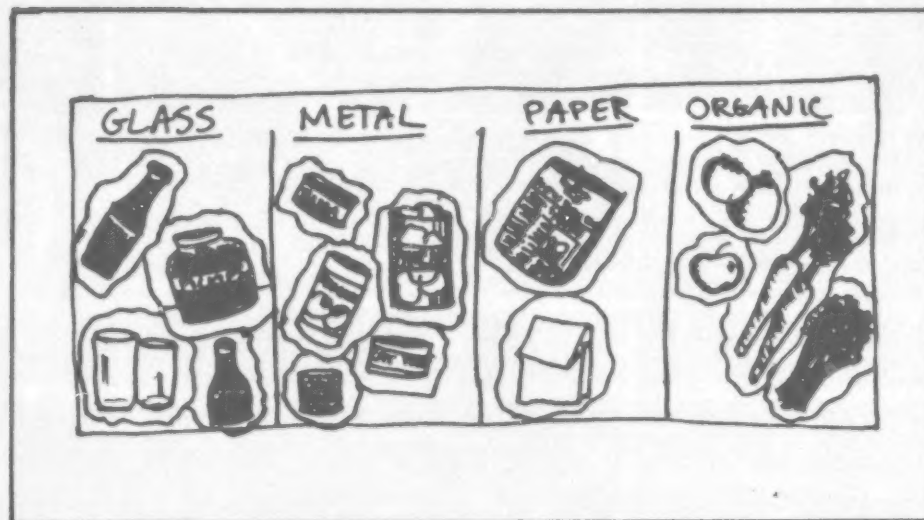
58 Sorting Mural

Age range: 2½ -6

of children: 4-5

Ingredients:

- pictures of different kinds of food (including organic scraps)
- pictures of containers that can be recycled (bottles, paper products, cans)
- large sheet of paper
- scissors
- glue
- crayons or markers



How to do it:

1. Before beginning, cut out pictures of different types of recyclable materials from magazines or newspapers.
2. Set out a large sheet of paper on a table or on the floor.
3. On the paper, mark the 4 types of recyclables (metals, glass, paper and organic materials).
4. Hand out the different pictures. Have the glue available. Ask the children to identify their picture one at a time and glue it in the appropriate section.
5. Write down anything that the children would like to say about recycling on the mural.

Helpful Hints:

- Discuss with the children the advantages of recycling and also the work involved in doing it. Ask them if they think it is a good idea and why?
- Ask if the children and their families recycle their garbage at home.

Recycle Station

Age range: 3-6

of children: 4-5

Ingredients:

- four medium sized cardboard boxes
- recycled computer paper, or other large paper
- crayons, or marking pens
- can opener
- scissors
- tape
- tin cans, paper bags, bottles, plastic containers or toilet paper rolls

How to do it:

1. Before you begin, cover the front side of the boxes with computer paper.
2. Print the names of each recycled material on the paper so that the children can color in the letters. Leave enough room for the children to draw a picture of the materials that will go into each box.
3. Show the children examples of each type of material and talk about why we recycle them. Demonstrate how to correctly remove paper labels from bottles and how to crush tin cans after taking off the top and bottom with an opener.

Helpful Hints:

- Pick a different child each week or each day to place the used up materials in the proper receptacles.
- If you soak the bottles and cans, the labels will come off easier and neater.



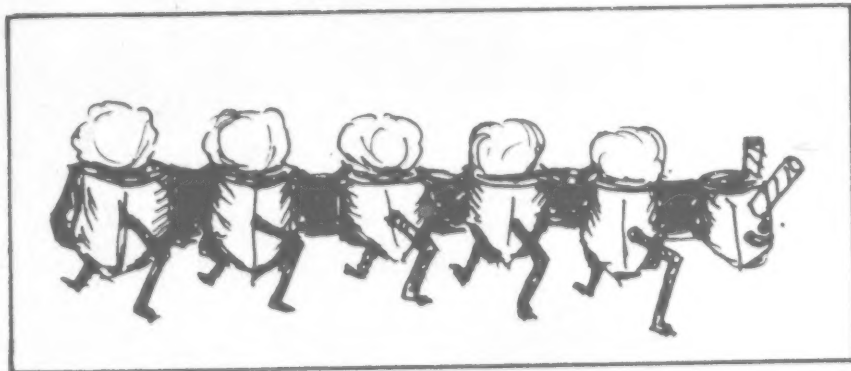
Egg Carton Caterpillars

Age range: 2-6

of children: 5-6

Ingredients:

- bottom halves of egg containers
- pipe cleaners
- paints and brushes
- hole puncher
- cotton balls
- newspaper for tables
- glue



How to do it:

1. Before you begin, cut the bottom of the egg carton sections into 12 individual parts and cut the pipe cleaners in half.
2. Make a hole on each end of the individual egg carton sections with the hole puncher.
3. Give the children 6 individual egg carton sections and 6 or 7 pipe cleaner halves.
4. Demonstrate how to run the pipe cleaner through the back of one egg section and through the front of the next one (it is like sewing them together).
5. Show the children how to twist the pipe cleaner ends together to make a strong connection.
6. Give the children cotton balls and glue to decorate the caterpillars. Bring out the paints and brushes and let the children use their imaginations to create their own caterpillars.

Recycle Printing

61

Age range: 2-6

of children: 5-6

Ingredients:

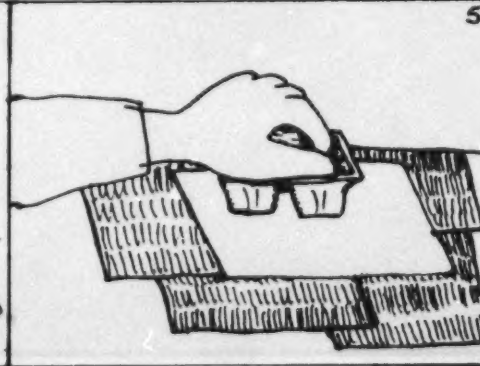
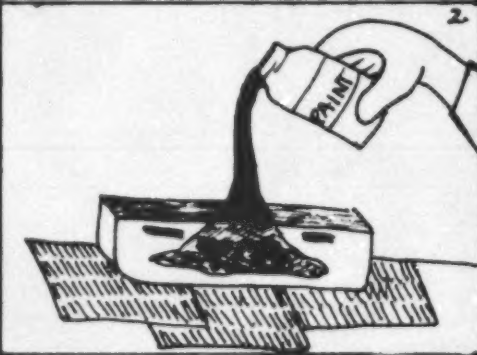
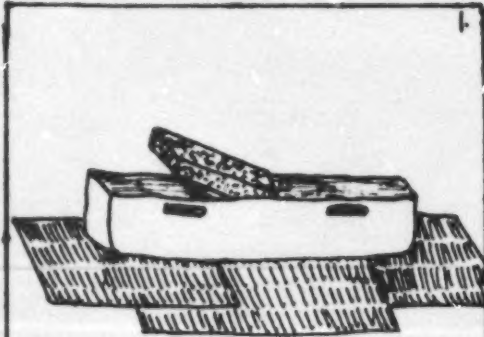
- 5-6 sponges
- 2 different colors of paint
- egg carton tops and bottoms
- newspapers for table and floor
- paper for printing
- toilet paper rolls, empty plastic containers, styrofoam packing material

Helpful Hints:

- This can be messy, so have the children wear smocks.
- Finished paper can be used for wrapping paper.
- The children may come up with a very different way of printing.
- Don't be discouraged if it does not look the way that you thought it might, let them experiment with the printing.
- A good follow-up activity can be to print with letters. If you have some rubber letter stamps, they will work well. If not, you can make your own with styrofoam or cork.

How to do it:

1. Wet the sponges and squeeze some paint into them. Place the sponges in the tops of the egg cartons. Two sponges will fit into each top, so use two different colors in each carton. The sponges will be used as printing pads.
2. Cut the egg carton bottoms into thirds so that you have three pieces with 4 egg holes in each. These will be used for printing.
3. Put other printing materials out: toilet paper rolls, plastic containers, etc.
4. Use the sponges as the printing pad. Dip a toilet paper roll into a sponge and press onto the paper leaving a circle print.
5. Demonstrate the printing on a piece of paper so the children have an idea of how to do it. Let them know that this is only one way and there are many different ways through which they can create their own printing.





Recycle Collage

Age range: 2-6

of children: 5-6

Ingredients:

- glue
- scissors
- cardboard
- seeds, bottle caps, walnut shells, cloth scraps, tissue paper scraps, other recycled materials

How to do it:

1. Give each child either a square, or circle of cardboard to use as the base for his/her collage.
2. Place the different recycled materials on the table with the glue.
3. Have each child glue the materials as he/she wants to.
4. During the project talk about what each material was used for originally. Ask the children what they are using the recycled materials for now.

Variations:

- A collage can be made of any one of these materials, for example, a scrap tissue paper and glue collage is fun and interesting to make.

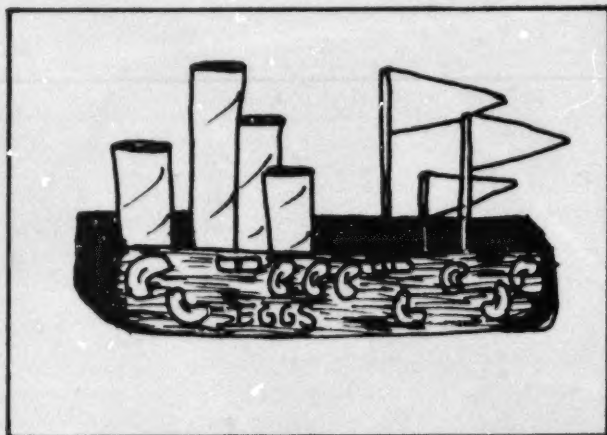
Rocket Ship Cartons

Age range: 2-6

of children: 5-6

Ingredients:

- bottoms and tops of empty styrofoam
- egg cartons
- cardboard toilet paper rolls
- construction paper scraps
- glue
- scissors
- marker pens
- styrofoam bits (packing material)
- toothpicks
- stapler
- any other recycled material that may seem appropriate



How to do it:

1. Before beginning this project with children, hand cut the paper scraps into flag size and staple them on to the toothpicks.
2. Give each child 1/2 of an egg carton and one or two toilet paper rolls. Fasten the paper rolls to the egg cartons with tape, glue or staples.
3. Give each child 2 or 3 flags and let them draw their names or a design they like on them with markers. The children can then stick the toothpick flags into any part of the styrofoam cartons.
4. Place the recycled materials on a table with glue and tape available and let the children "individualize" their rockets. Have markers available for drawing on the rocket ships.

Helpful Hints:

- This project can be messy so be sure to spread newspapers on the table to minimize clean-up time.
- You can help children to create their own rocket by asking them to describe what a special rocket would look like. As the children describe their rocket, try to find different recycle materials that could become a part of the rocket.
- You can give suggestions to the children about where to place different things on the rocket ship, but let them decide where to place the things themselves.

64 Paper Bag Puppets

Age range: 2-6

of children: 4-5

Ingredients:

- recycled small paper bags
- yarn
- styrofoam chips
- old buttons
- crayons
- glue
- scissors

How to do it:

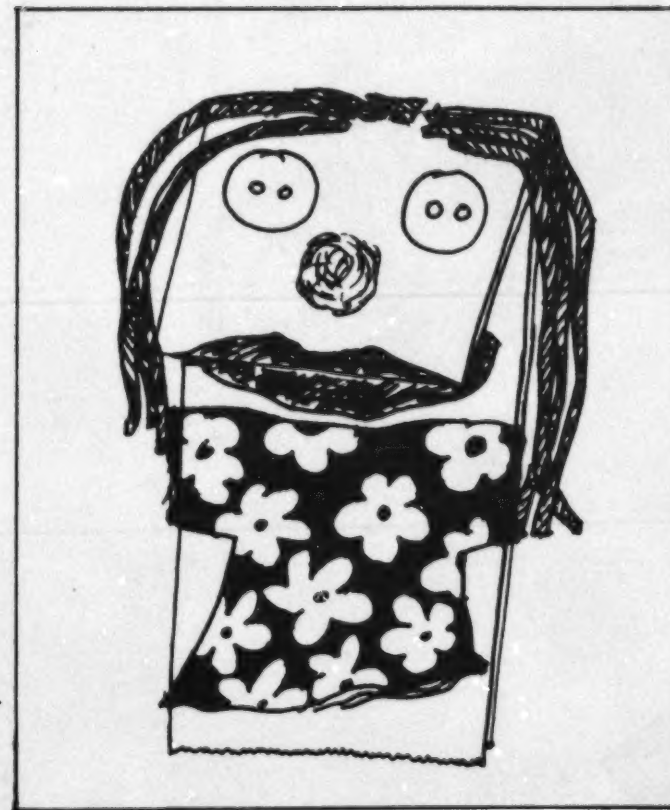
1. Give each child a bag and set the yarn, buttons, crayons, glue, and scissors on the table.
2. Show the children that they can glue the yarn, (after they cut it into manageable pieces) onto the bag as hair or beards. They can glue the buttons on for the eyes and the nose. The styrofoam chips can be ears and the crayons can be used to draw any other effects needed such as clothes.
3. Show the children how to place their hands into their bag gently to animate their creations.

Helpful Hints:

- The children can put on a puppet show if they are interested. Fairy tales are wonderful stories to do shows with young children.
- Puppets can be used by the children and adults to work out anger, frustration and any other issues that need attention.

Variations:

- Use egg carton bottoms for eyes. Cut out the individual pieces to be used as eyes, nose, ears, or whatever the children can think of.
- Use cloth scraps for clothes, hats, or whatever the children can create.



Paper Hats

65

Age range: 4-6

of children: 4-5 children with each adult

Ingredients:

- a full size sheet of newspaper for each child
- crayons, stickers, markers

Helpful Hints:

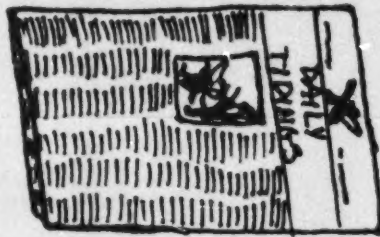
- Choose a large space (eg. the floor) for the children to work on.
- When working in a group, make sure each child has completed a given step before continuing to the next step.
- Don't have the children paint the hats as they will rip.

Variations:

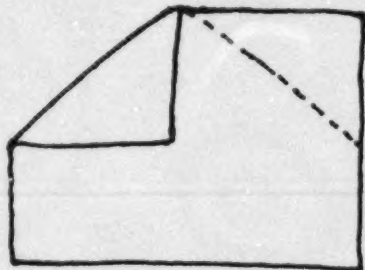
- The top point of the hat can be folded down and tucked into the brim for a different shape of hat.
- Glue any collage materials (dried beans, seeds, styrofoam chips, etc.) for a fancy hat.

How to do it:

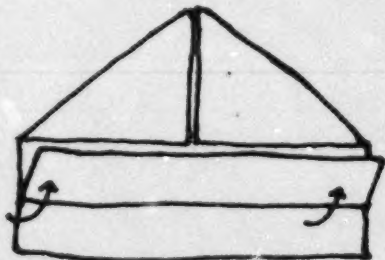
1. Fold newspaper on its original crease to form a rectangle. Place the open (not folded) edge toward you. (fig. 1)
2. Fold the top corners down so that they meet in the middle to form a triangle. (fig. 2)
3. Fold the top sheet of newspaper up so that the straight edge is even with the bottom of the triangle. (fig. 3)
4. Fold the same paper again to cover the bottom edge of the triangle. (fig. 4)
5. Turn the whole hat over. Fold the sides of the hat toward the center so that the edges meet in the middle. (fig. 5)
6. Fold the bottom portion (step 3) so that the straight edge is even with the bottom edge of the triangle. (fig. 6)
7. Fold the same paper again so that the bottom edge of the triangle is covered. (fig. 7)
8. Tuck the last fold into the "pockets" formed by the fold in steps 3&4. This will hold the hat together without staples or tape. (fig. 8)
9. Have the children decorate the hats with crayons, stickers, markers, etc.



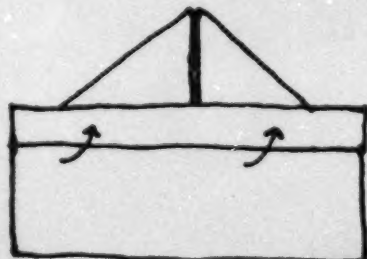
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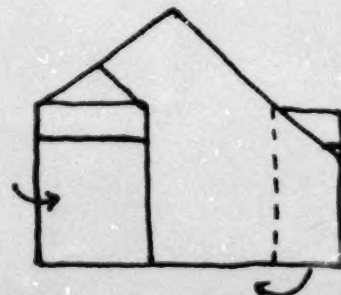
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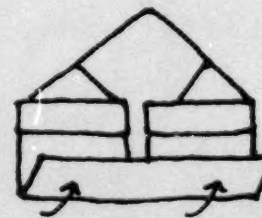
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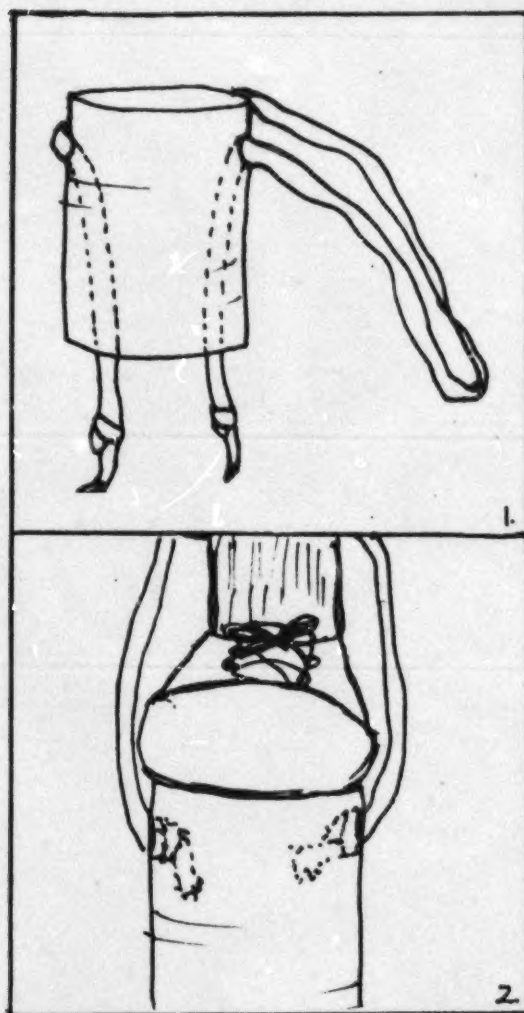
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Tin Can Stilts

Age range: 3-5

of children:

Ingredients:

- 2 tin cans for each child
- 2 pieces of rope or twine
- hammer
- nail

How to do it:

1. Help the children nail two holes on opposite sides of each can, about 1 inch from the bottom.
2. Thread the rope from the outside to the inside with one end in each hole.
3. Pull the threads through so a knot can be tied in each end. This holds the rope onto the stilt.
4. Have the child put his/her foot on the turned-over can and walk by holding the string tightly as he/she takes a step.

Variations:

- The tin cans can be covered with decorated construction paper or magazine pictures.

Helpful Hints:

1. Help the children learn to walk with the stilts by encouraging them to make the can "stick" to their foot by keeping the rope tight.
2. For younger children use tuna fish or cat food cans since they are not as tall.
3. Have the children practice on a rug or grassy area to start with. There are usually a few falls while children learn to use the stilts.
4. Use the same size cans for each pair.

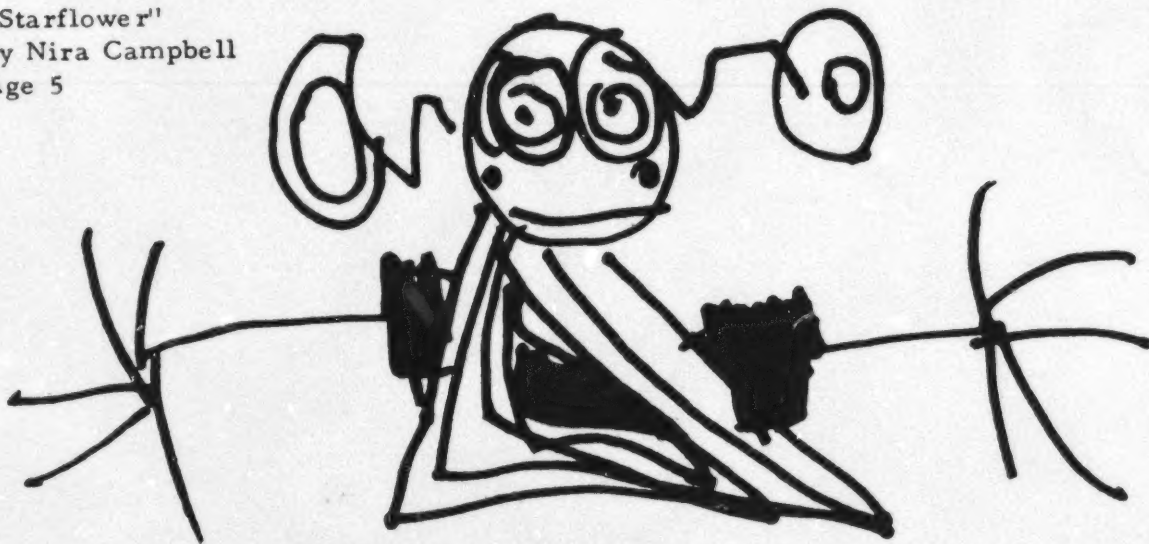
Additional Activities

Egg Shell Collage: Save egg shells from cooking projects or lunch time. Crumble shells and glue on paper. If you have hard boiled eggs for lunch, dye the eggs with the children and save the shells for a collage. The dyed egg shells make a very colorful picture. If you are using undyed shells, have the children paint them with water colors after they are glued down.

Garbage Walk: Give each child his/her own garbage bag. Take a walk around your school or home and collect garbage. Have the children try and fill their bags with the garbage that they find. Ask the children how they think the garbage looks on the ground. When you return to your school or home, you can throw the garbage away, or you can make a garbage collage (see below activity).

Garbage Collage: Take all of the garbage that you have collected on your garbage walk and create a garbage collage. Glue the various wrapper labels and plastic to a large piece of paper. Ask the children if they like the garbage on the ground or on their collage.

"Starflower"
by Nira Campbell
Age 5



Books

Olaf's Incredible Machine, by Nicholas Brennan
Dinosaurs And All That Rubbish, by Michael Foreman
Ick's A.B.C., by Fred Gwyne
The Compost Heap, by Harlow Rockwell
Only Silly People Waste, by Norah Smardige

Resource Books:

What Happens To Garbage, by Rona Beame
What Can You Make Of It, Franz Brandenburg
Recycle Resources, by Lawrence Pringle
About Garbage And Stuff, by Anne Zane Shanks

Field Trips

-Visit a recycling center: Take a tour of the center to see how different materials are recycled. Bring your own recycled materials from your school or home recycling stations. Have the children place your recyclables in the proper containers at the center.

-Visit a garbage "dump": Have the children see the garbage pit. Ask the children if they can see things in the garbage pit which can be recycled. Ask them how they think the garbage pit looks.

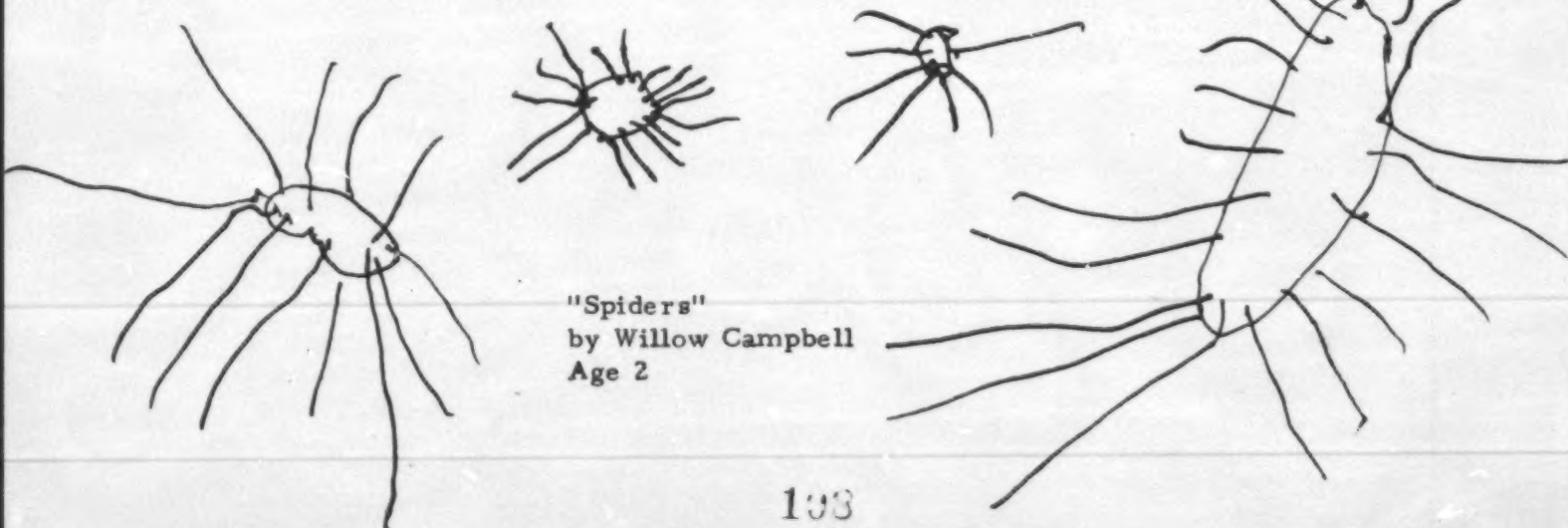
-Visit a paper mill: You can tour a paper mill to see how paper is made. Children can see how paper comes from trees and how many trees are cut down to make paper. After the trip, a discussion about wasting paper can be helpful. You can talk about how important it is to conserve paper so that we can cut as few trees as possible.



In our unit on animals, we try to explore a part of the reality of animal life through projects and presentations. By giving young children insights into the lives of animals, we are giving them another perspective from which to view their own lives. We want young children to develop a respect for animal life so that they can understand how fragile and unique it is.

We can create an awareness of animal life by presenting young children with the basic requirements of life. A good way to begin this is to have a pet in your school or home that the children can become responsible for. They can take care of the needs of your pet, such as feeding, cleaning, and nurturing. If possible, try to have a pet that young children can hold and feel (turtle, chameleon, hamster, or guinea pig). When children hold animals they can see how fragile the animals are. A young child, for example, who holds a guinea pig for the first time may be excited about the soft touch of the animal. However, the child must learn that he/she can not squeeze the animal like it is a doll. An adult can help a child to understand this by telling him/her that the animal can be hurt if not handled carefully.

First hand experience in the care of an animal is an important learning experience for a child. It could set the tone for a positive relationship between that child and the animals in his/her environment.



Ocean Mural

This is an ongoing project which combines six activities into one finished product. The activities could be extended over several days, or condensed into a few days, depending on how many activities you do each day. This project is an especially enjoyable and effective one if it is done during the summer months when water can be available to play in and/or when children may be visiting the ocean with their families.

The Ocean Mural Project can be focused on any theme in which you want to create the illusion of a different environment. This can include a jungle, forest, farm, city, sky, house, park, etc. To do this you need to paint the appropriate background and add on other related activities.

The following is a list of the activities which will be presented in the next few pages:

- The Water
- Ocean Floor
- Crepe Paper Seaweed
- Ocean Animal Pictures
- Fingerpaint Fish
- Whale

Use your imagination to add onto the mural any other kind of ocean-related material either you or the children can think of.



The Water

Ingredients:

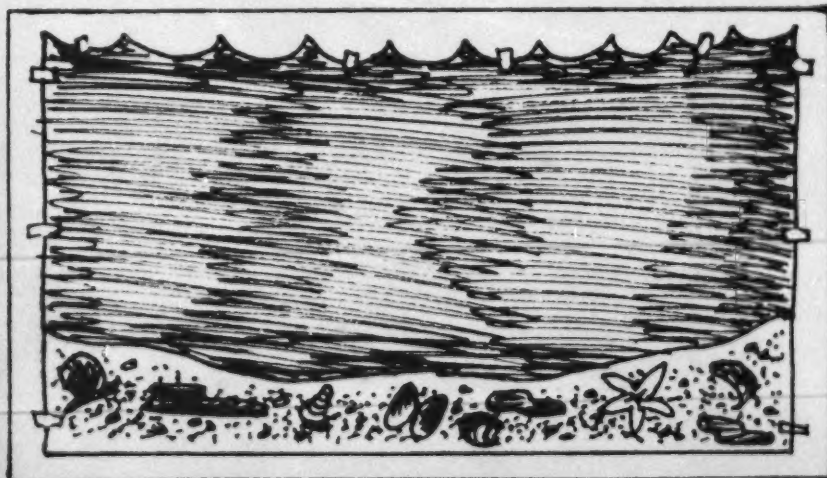
- old sponges
- blue, green, and white paint
- paper 6ftX4ft
- scissors
- staples or tape

How to do it:

1. Staple or tape the paper to a wall
2. Have bowls with different color paints and sponges on the floor or on a table nearby. Let the children paint the paper thoroughly in any manner they choose.
3. When the painting is finished, take the scissors and cut the top edge of the paper into wave shapes.

Helpful Hints:

- This is a messy project! Have the children wear smocks and place newspaper on the table and floor.



Ocean Floor

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Ingredients:

- strip of paper 2 ftX6 ft long
- sand
- shells
- pieces of driftwood
- glue and brushes
- newspaper for table

How to do it:

1. Lay out the strip of paper on the floor or on a table. Have the glue and brushes ready.
2. Tell the children to brush the glue on heavily. Cover the glued paper with sand, shells, and driftwood.
3. When the children are finished, staple this paper along the bottom part of the mural.

Helpful Hints:

- Try to make the pieces of driftwood very small as they will be easier to glue on the paper.
- If you **don't** have driftwood, you can use twigs or dead branches.

Crepe Paper Seaweed Ocean Animal Pictures

Ingredients:

- 3 or 4 different colors of crepe paper cut into strips
- stapler or tape

How to do it:

1. Hand out the crepe paper to the children.
2. Have them staple one end to the mural, then twist it, and staple the other end down to the mural.

Helpful Hints:

- Try to use ocean colors for the crepe paper.

Fingerpaint Fish

- See Fingerpainting with leaf shapes on page 18. Follow pattern guide at end of chapter.

Ingredients:

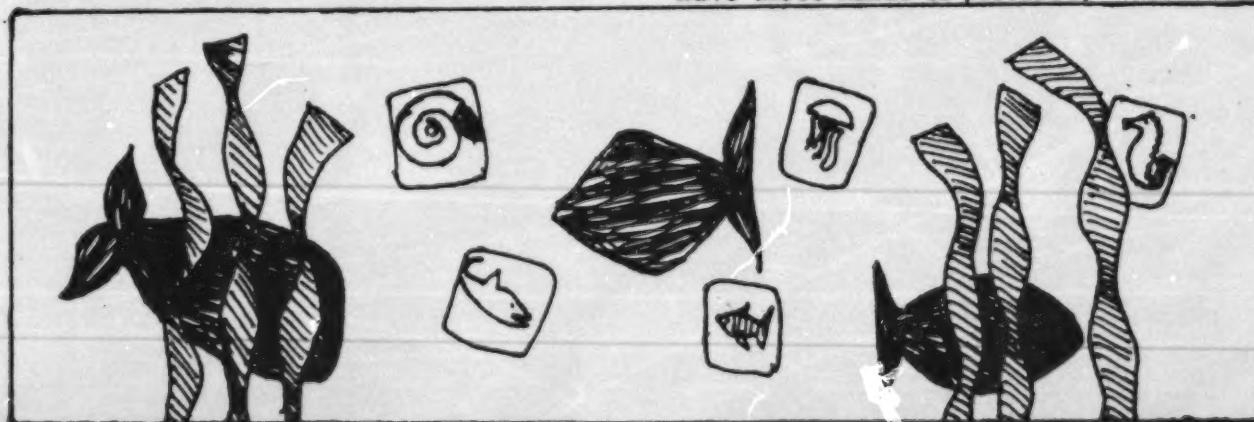
- pictures of different sea creatures from magazines
- glue
- scissors

How to do it:

1. Before beginning, find and cut out pictures of sea creatures from magazines.
2. Set out glue and pictures and let the children put them on the large mural in the places that they decide.
3. Encourage children to place the pictures in the part of the ocean that the animal lives, for example, fish and whales live in the water, while crabs, lobsters, and shellfish live on the ocean floor.

Helpful Hints:

- If you are working with older children, have them try to find pictures themselves and cut them out.
- Try to find nature magazines which would have these kinds of pictures.



Ingredients:

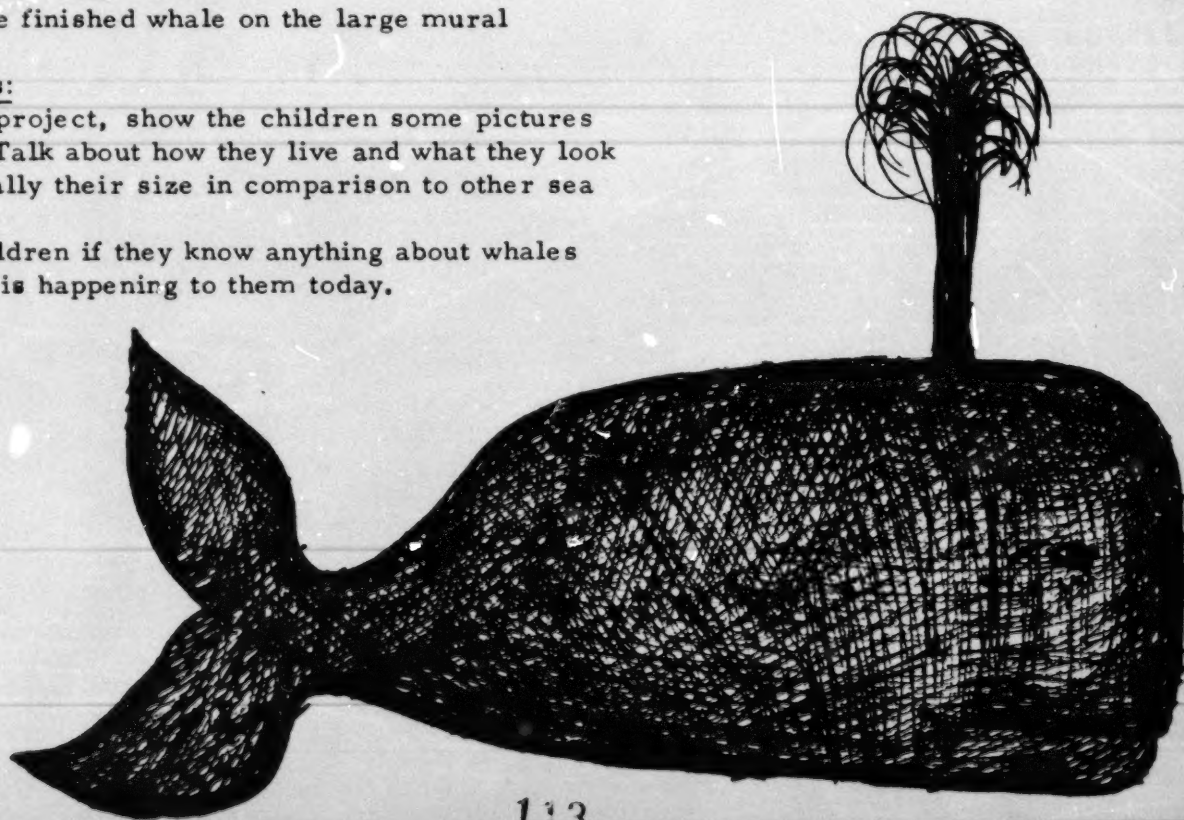
- the outline of a whale on a large piece of paper
- markers or watercolors

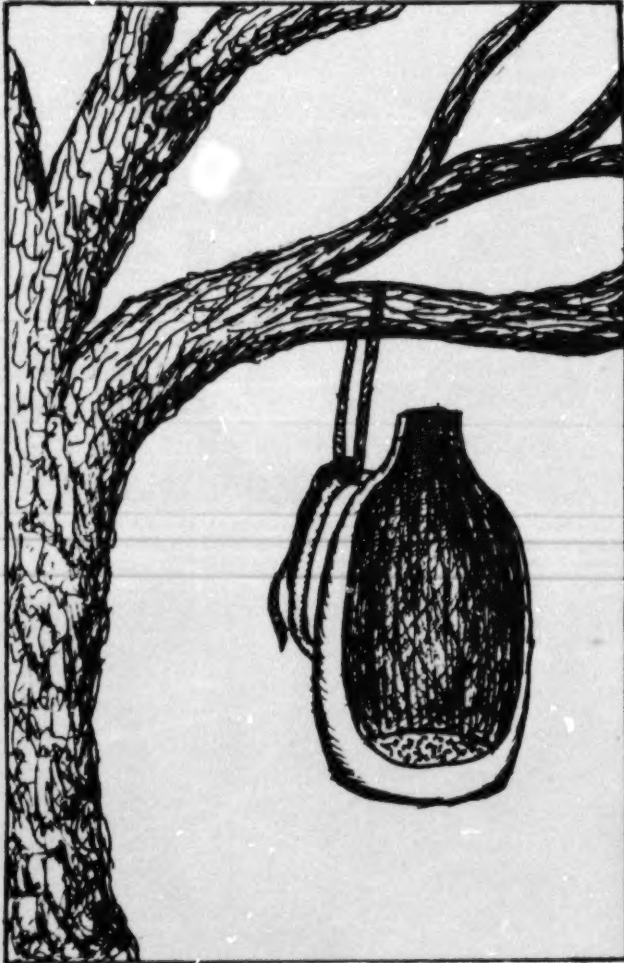
How to do it:

1. Before beginning, draw the large outline of a whale on a large piece of paper.
2. Bring out the whale paper with the markers or paints. Let the children use their imaginations in filling in the different parts of the whale.
3. Staple the finished whale on the large mural

Helpful Hints:

- Before the project, show the children some pictures of whales. Talk about how they live and what they look like, especially their size in comparison to other sea animals.
- Ask the children if they know anything about whales and/or what is happening to them today.





Bird Feeder

Age range: 3-6

of children: 6

Ingredients:

- 3 recycled qt. or 1/2 gal. plastic bleach containers (make sure the bleach container is thoroughly washed!)
- marking pens or paints
- bird feed mix
- string

How to do it:

1. Before you begin, cut an opening into the face of the bleach bottle so that bird seed can later be put into it by the children.
2. At project time, hand out one bleach bottle to each pair of children.
3. Let them decorate the outside of the bottle with the paints or marker pens. When they have finished decorating, give them the bird seed to place inside the bottle. They should fill it even with the bottom of the opening in the bottle.
4. When they are finished, take the children outside to hang the bird feeders in a tree or near a window of your home or school.

Helpful Hints:

- Talk about what the bottle was originally used for and how it helps the birds by using it as a feeder for them now.
- Ask the children to observe the feeder daily to let you know when it is empty.

Sewing Birds

75

Age range: 3-6
of children: 5-6

Ingredients:
-construction paper
-shapes of a bird
-pictures of different kinds of birds
-hole puncher
-yarn with stiff ends cut in 2 ft lengths
-newspaper or cotton for stuffing

How to do it:

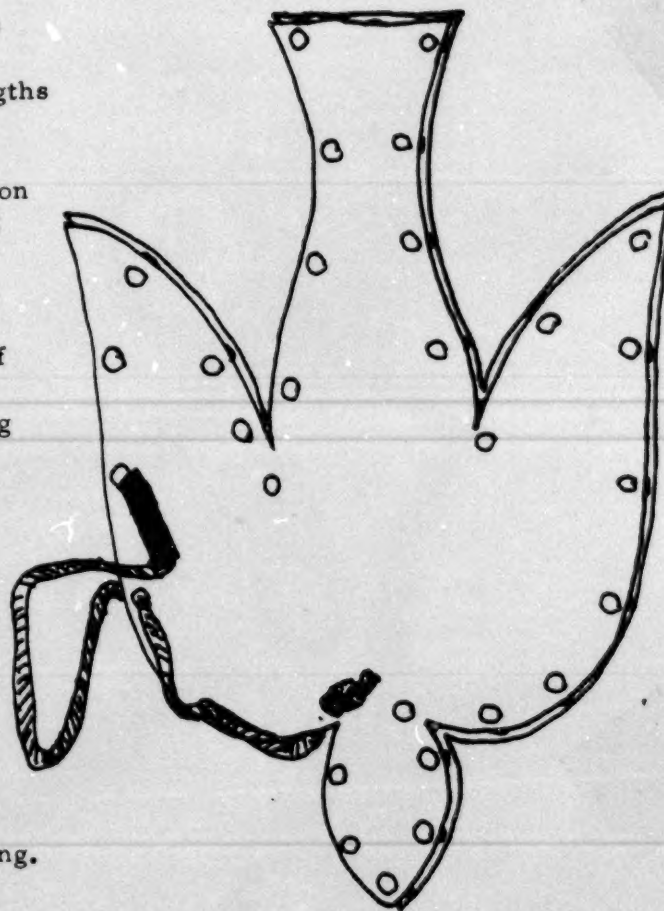
1. Before the project, cut out the bird shapes in the construction paper. Make sure that you have enough for each child to have 2 bird shapes.
2. Hold the 2 bird shapes together and punch holes around the bird 1-2 inches apart.
3. At project time, give each child 2 bird shapes and a piece of yarn.
4. Thread the yarn through 1 hole and tie firmly without ripping the paper.
5. Show the children how to sew the birds together by weaving the yarn in and out through the holes. Be sure to leave a space unsewn to stuff the bird.
6. Have the children stuff their birds and then continue sewing until the bird is completely sewn.

Helpful Hints:

- Tape around the edges will reinforce the yarn and hold in the stuffing.
- Dip the ends of each piece of yarn into glue and let dry. This will stiffen it to help the children with the sewing.
- Before the project, talk about the type of bird you will be sewing. Ask the children if they have ever seen a bird like this before. Where do they think that this bird might live?

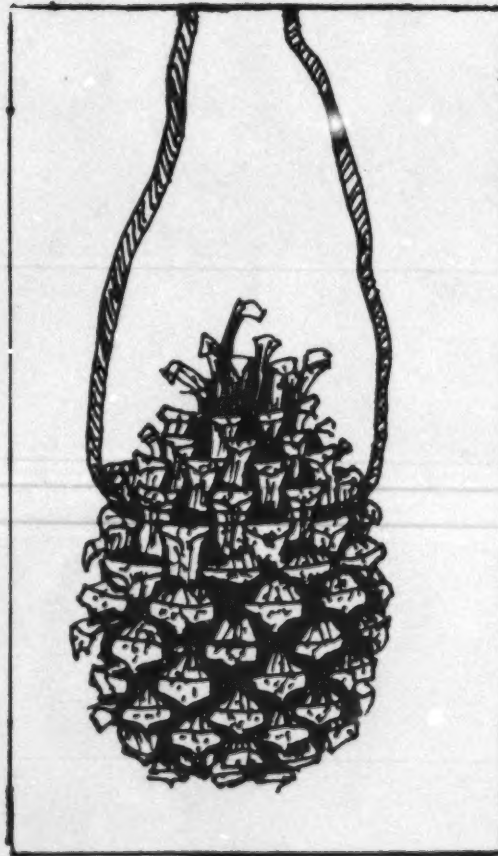
Variations:

- This project can be adapted to any theme (pumpkins, flowers, insects, trees, etc.)



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Pinecone Bird Feeders



Age range: 2-6

of children: 5-6

Ingredients:

- pine cones
- shortening
- string
- birdseed or sunflower seeds
- dull knives
- thumbtacks

How to do it:

1. Give each child a pine cone.
2. Tie or thumb tack a string to the cones.
3. Hand out knives and set out the shortening. Have the children spread it with knives over all of the cone.
4. Set out bird seed or sunflower seeds and let the children sprinkle this onto the pine cone.
5. Take a group of children out to a tree and tie the feeders to different branches. They can also be hung outside a window or anywhere children can observe birds feeding.

Helpful Hints:

- Ask the children if they know why it is important to put out bird feeders. What time of year do birds need help to find their food? What other kinds of food do birds eat?

Binoculars

77

Age range: 2-6

of children: 5-6

Ingredients:

- cardboard toilet paper rolls
- tape
- marking pens
- tinted or regular celophane
- rubberbands

How to do it:

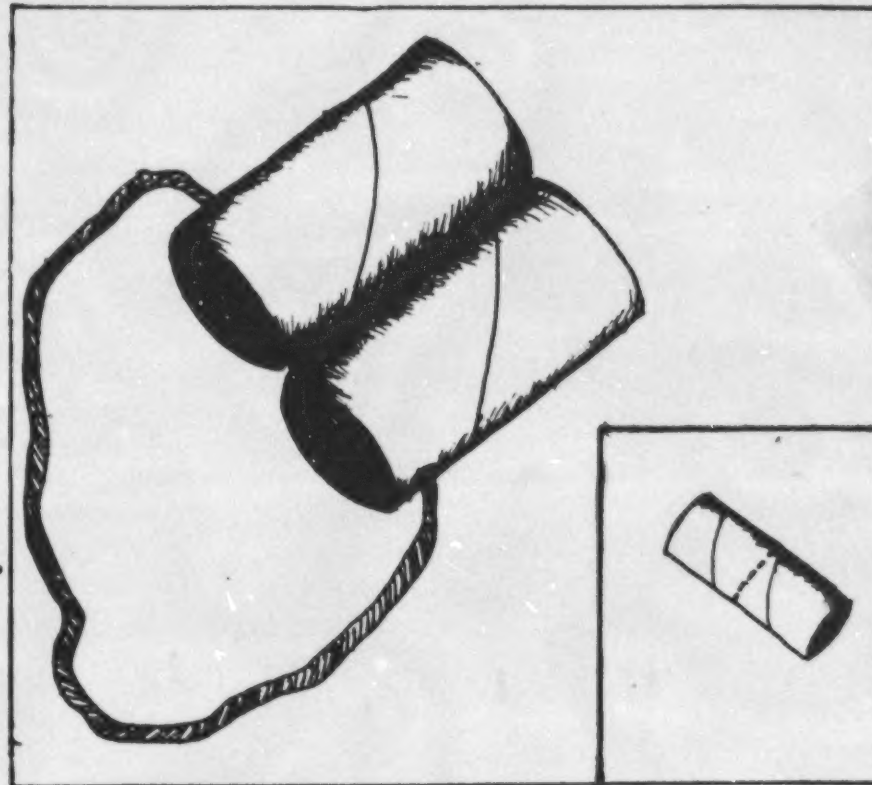
1. Give each child a toilet paper roll that has been cut in half. Hand out the marking pens and let the children decorate the rolls.
2. When they are finished decorating the rolls, cut squares of cellophane and attach them to the end of the rolls with rubber bands.
3. Tape the rolls together side by side.
4. Take the children outside to view birds and many other objects.

Helpful Hints:

- A string can be attached to each side of the binoculars so that they can hang from the children's necks.
- Bring in a real set of binoculars for the children to view. Ask the children how they think that things look through the real binoculars.

Variations:

- By taping together 2 toilet paper rolls lengthwise or by using paper towel cardboard roll, a telescope can be made.



78 Nests

Age range: 2-6

of children: 6-7

Ingredients:

- milk cartons cut down to about 4" high (half gallon work best)
- straw or grass
- playdough
- small twigs
- bits of yarn and string

How to do it:

1. If possible, either the same day or the day before, take the children to a field to gather grass, twigs, and anything else that would help make a bird's nest.
2. Give each child bits of string and yarn along with the grass and twigs.
3. Show how the birds would build their nest by putting pieces of each ingredient in the nest one at a time.
4. Give the children some playdough and let them make eggs or whatever shape they would like to put in their nests.

Helpful Hints:

- Talk about birds nests compared to our houses and the way birds and people live in their houses.
- Ask the children if they know what happens to the eggs in the nest.

Variations:

- The children could mix up a batch of mud to use in firming up their nests.



Create-A-Farm is an ongoing project with many different activities. As in the Ocean Mural, the activities can be done in a few days or spread out over a week. It is helpful to find some picture books about farms and farm life for the children to look at while you are doing this project.

Farm Terrain

Age range: 2-6

of children: 5-6

Ingredients:

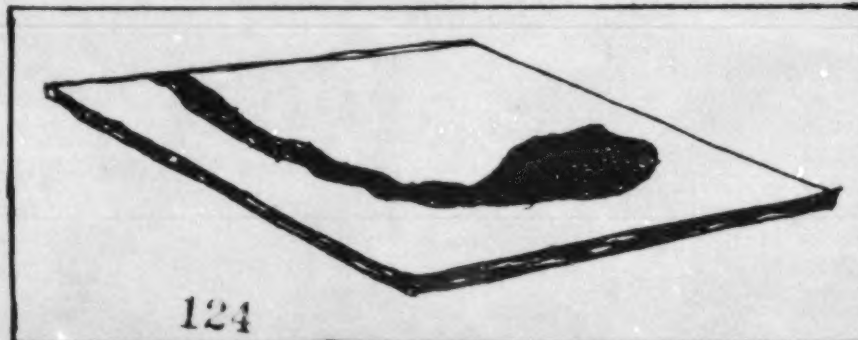
- large piece of cardboard
- crayons or markers

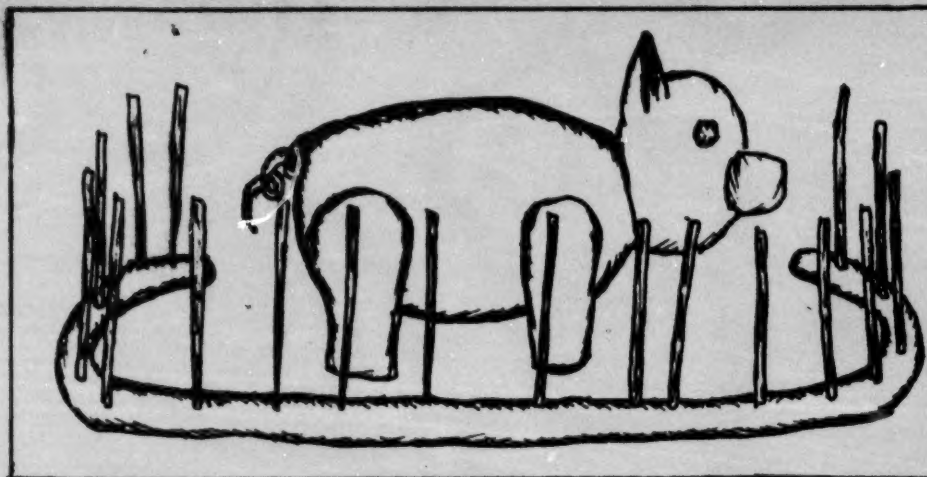
How to do it:

1. Before beginning, on the large piece of cardboard outline a few basic farm areas, such as a barn, a pond, a pasture, and a farm house.
2. At project time, lay the cardboard on the floor or on a table and hand out the markers or crayons.
3. Encourage the children to color in the pond, the pasture, the barn, and the house area. Have the children draw in any other area that they think needs to be added.

Helpful Hints:

- Before the project begins, show the children pictures of farm life. Talk about what it would be like to live on a farm. What kinds of things might they do different than living in a city? What kinds of work would they do to help on the farm?





Toothpick Fence

Age range: 2-6

of children: 5-6

Ingredients:

- toothpicks
- playdough

How to do it:

1. Give the children toothpicks and a handful of playdough.
2. Demonstrate how to make the fences, which can be made 2 ways. You can place small bits of playdough down in a row and then stick individual toothpicks into each one, or you can roll out a ball of playdough into a long, thin, pencil-like shape and stick the toothpicks into it. Either way is fun.
3. Place the fences on the farm layout. Let the children decide what they should be used for.

Helpful Hints:

- Talk about fences with the children. Are there any fences at school or home? Why are there fences on a farm?

Playdough Animals

Age range: 2-6

of children: 6

Ingredients:

- playdough
- pictures of farm animals

Playdough Recipe

4Cups flour

1Cup salt

3Tbs oil

1 1/2 Cups water

food coloring or tempa paint

How to do it:

1. Have the children help mix the playdough recipe.
2. Show the children pictures of farm animals
3. Encourage the children to use their imaginations to model the animals for the barnyard.

Helpful Hints:

- If the children become frustrated because they are not able to model the playdough to look like a farm animal, ask them to create their own animal.

Potato Animals

81

Age range: 3-6

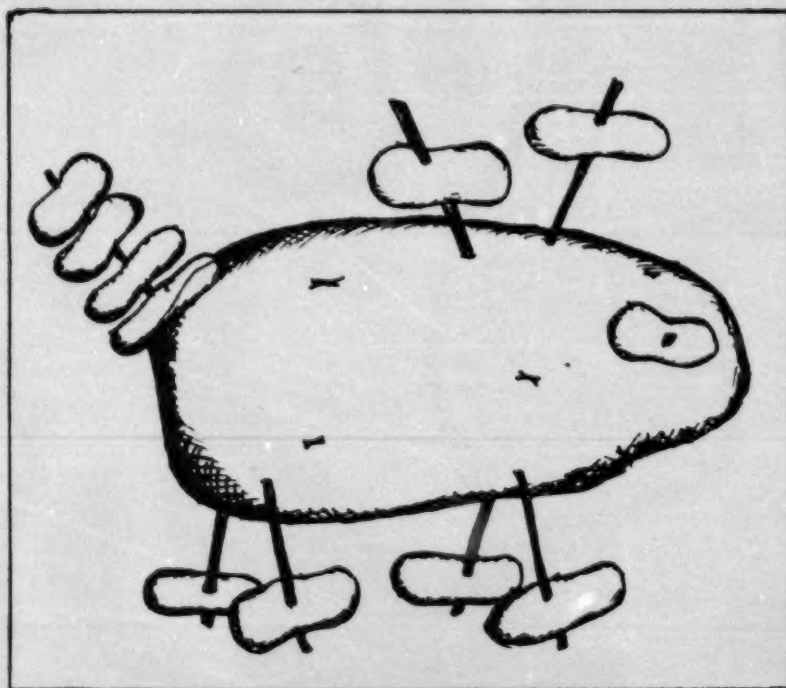
of children: 6

Ingredients:

- small slightly boiled potatoes
- toothpicks
- playdough
- styrofoam chips

How to do it:

1. Before you begin, steam the potatoes for a few minutes so that a toothpick can be stuck into it easily by a child.
2. At project time, hand out a potato to each child along with toothpicks and a tray of styrofoam chips. Playdough can be used instead of the chips or along with them.
3. Show the children how to stick the toothpicks into the potato. Attach the styrofoam or playdough to the toothpicks to form different parts of the "potato animal's" body.



Helpful Hints:

- Help the children to use their imaginations by creating a creature yourself. It should be used as a guide to show children that their creations don't have to look exactly like a farm animal.
- Potato animals can be placed on the farm layout. Let the children do it.

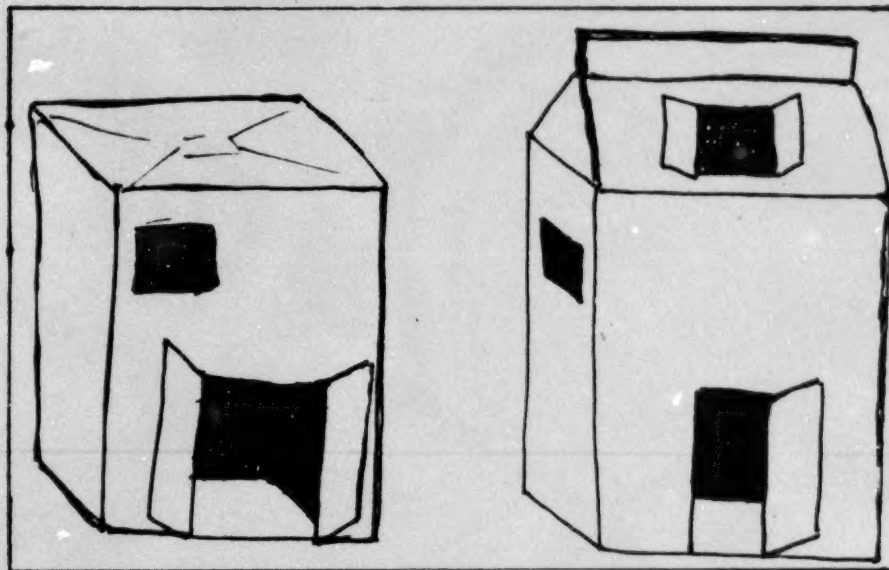
Milk Carton Buildings

Age range: 2-6

of children: 6

Ingredients:

- recycled quart and 1/2 gallon milk cartons
- sharp knife
- scissors
- paints and brushes
- glue and brushes



How to do it:

1. Before you begin, cut some of the milk cartons in half, leaving others full size. Cut little windows and doorways into the sides of the cartons.
2. At project time, hand out 2 cartons to each child. Have the paints and brushes available for the children to decorate the cartons.
3. Suggest painting the different parts of the houses and barns different colors, such as the roof, doors, and sides.
4. When the children are finished and the cartons are dry, bring them over to the farm layout and let the children decide where to glue the houses and the barns.

Helpful Hints:

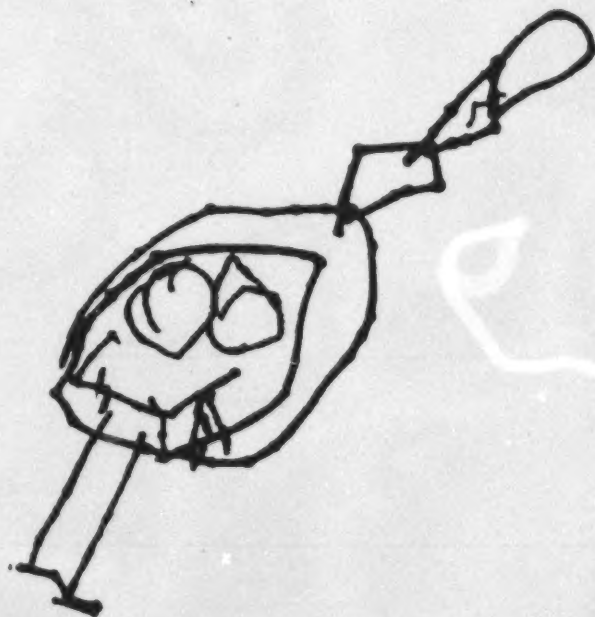
- Talk about what activities go on in the house and the barn. Looking at pictures from magazines will help.
- Ask the children why these parts of the farm are important to the farm.

Circus

Hey, let's have a circus!

With painted faces, jugglers, and clowns, the Amazon Circus has come to town for two years and has been a raving success. In fact, we have packed the "house" each time!

The idea of putting on a circus may seem like an amazing amount of work to take on. It can, however, be very simple. With simple activities, a circus (Big Top and all!) can be created. We made decorations and costumes, learned songs, and spent a week doing activities which focused on the circus and circus animals. Most of these activities were added to create more excitement as the week progressed. The circus itself lasted only a half hour and most of the excitement of the day centered on painting faces and putting on costumes. The show went on, with dancing elephants and singing tigers--and even a popcorn man in the audience! Through it all, the children enjoyed being a part of a group event.



"This is me as a clown."
by Tamar Greenstein
Age 3

Streamers

Age range: 2-6

of children: 6

Ingredients:

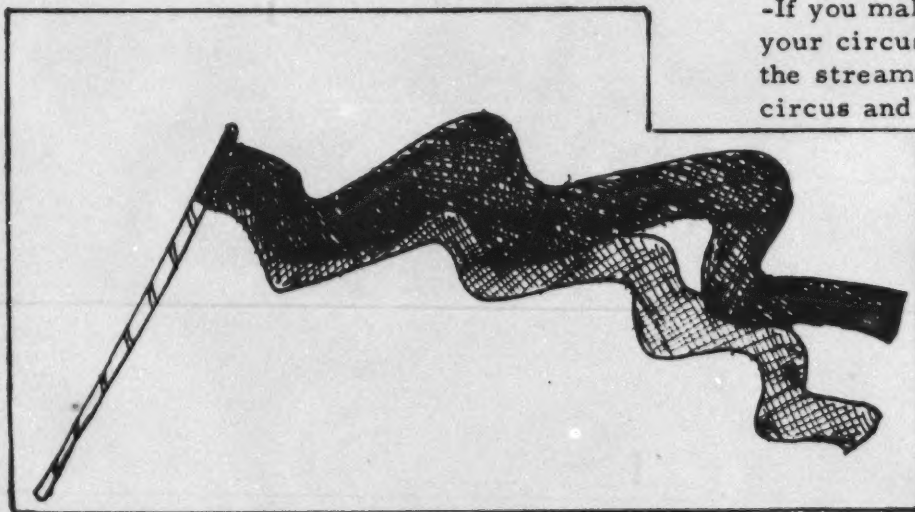
- plastic straws
- tape or stapler
- rolls of colored crepe paper
- 2 ft lengths of colored yarn

How to do it:

1. Before beginning, cut up crepe paper into 2 ft lengths
2. At project time, hand out a straw to each child.
3. Give each child a few different colored streamers and a few different colored lengths of yarn.
4. Have the children gather them up with the ends even.
5. Staple or tape them to the end of the straw.

Helpful Hints:

- Write the children's names on their streamers.
- If you make them a few days prior to your circus, save them. Explain that the streamers are for the day of the circus and they will be used then.



Popcorn Bags

85

Age range: 2-6

of children: 6

Ingredients:

- small recycled paper bags
- sparkles
- colored tissue paper scraps
- crayons or markers
- glue

How to do it:

1. Give each child 2 small paper bags.
2. Put out glue, tissue paper, and sparkles. Let the children decorate the bags. Also have crayons available and have the children write their names or make any designs that they would like.



Helpful Hints:

- Just before circus time, make some popcorn with the children. Then have them fill their bags and pass the popcorn bags out to their parents brothers, and sisters who have come to see the circus.
- Popping popcorn is a good activity to do while the children are waiting to have their faces painted.

Face Painting

Age range: any age child or adult!

of children: as many as needed

Ingredients:

- cold cream
- stage make-up
- thin paint brushes

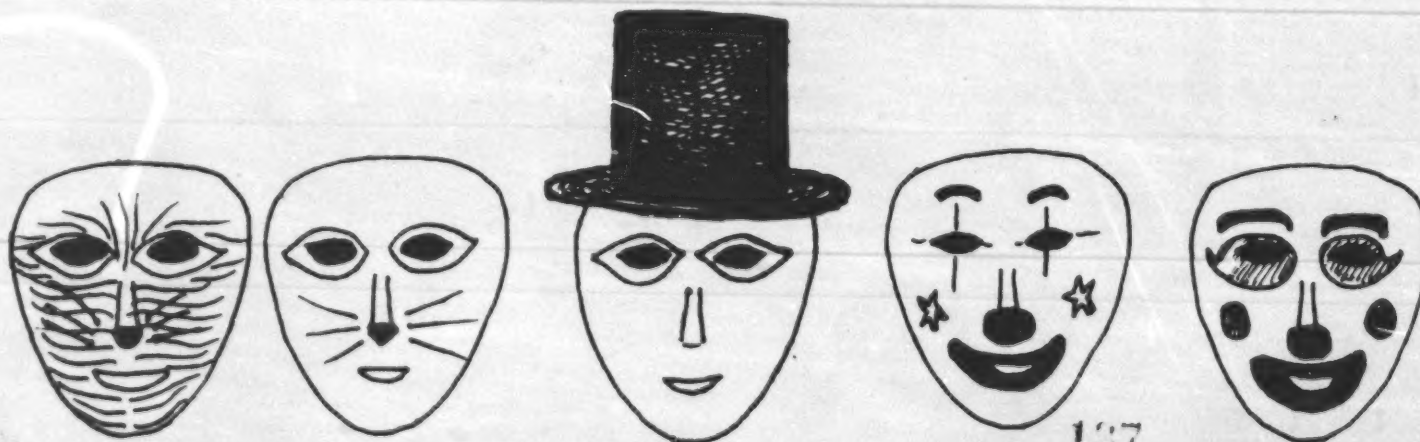
How to do it:

1. Put some cold cream on a child's face (this will help in removing the make-up)
2. Ask the child what fantasy character or animal he/she would like to be.
3. Try to create this character with the make-up. In putting on the make-up, don't over apply. Use the minimum amount of make-up to create the desired effect.

Helpful Hints:

- Try to have 2-3 other people helping to paint the children's faces.
- Have playdough or another activity available for the children while they wait to have their faces painted.
- If this project is done along with the other circus activities, the children's faces can be painted according to the hats or animal ears that they will wear.
- Tell the parents to use additional cold cream to remove the face paint.

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Animal Hats

87

Age range: 2-6

of children: 4

Ingredients:

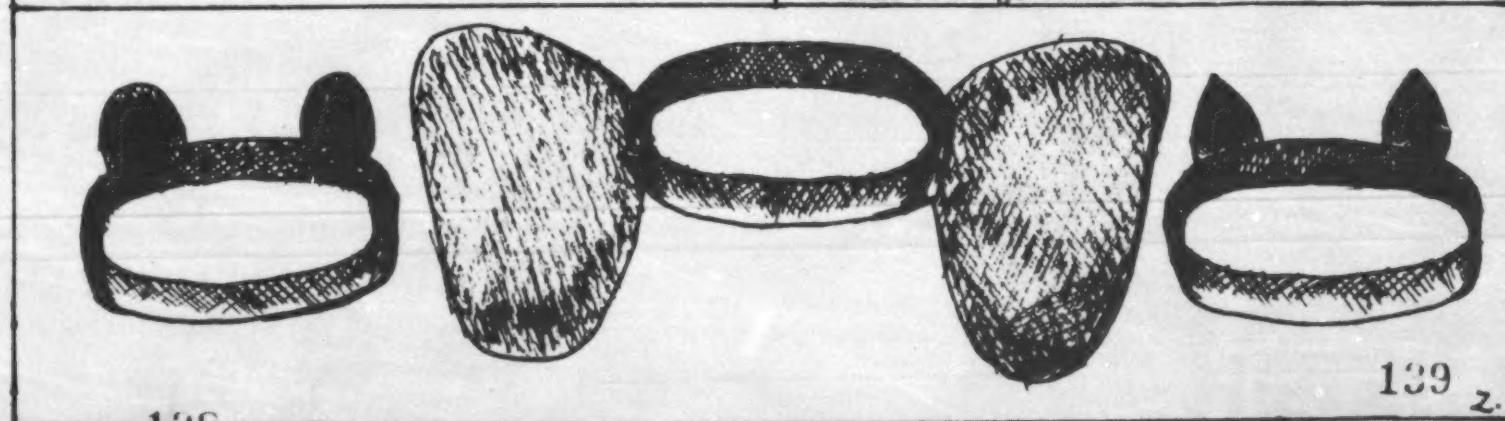
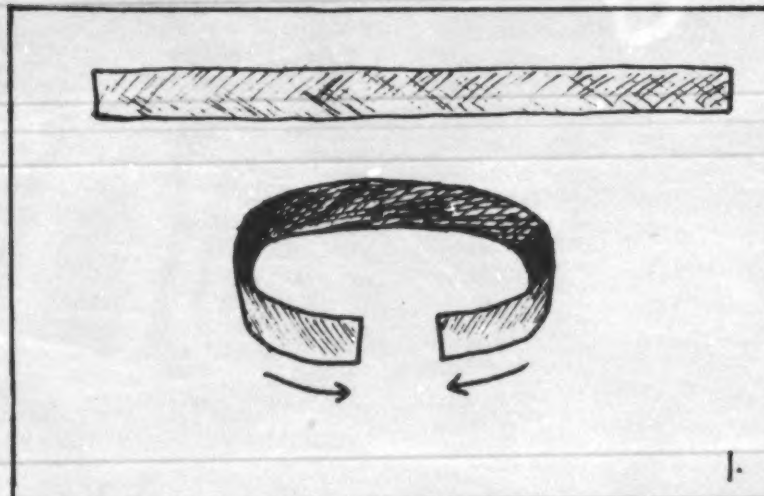
- 2-3inch wide strips of colored construction paper
- stapler
- sheets of colored construction paper
- scissors
- markers, or crayons

How to do it:

1. Make a head band for each child by wrapping a strip of paper around the child's head to get the right measurement. Then staple it securely.
2. To make an elephant costume, draw 2 large ears on a sheet of construction paper.
3. If the children can handle a pair of scissors well enough, let them cut out the parts of their animals. If not, you can do it.
4. Let the children color the ears as they like.
5. Then you or the child can staple the ears to the head band.

Helpful Hints:

- For other circus animals, exaggerate a feature of the animal and also use face painting to create the desired effect. For example, a tiger could have cat-like ears and a striped face to go along with it.
- Have the children wear any kind of clothing that could go with their costume.



Books

Animals, Aulaire

Animals Should Definately Not Wear Clothes, Barrett

Do You Want To Be My Friend?, Carle

The Girl Who Loved Wild Horses, Goble

Zoo City, Lewis

Animals On The Farm, Rojawkonsky

Leave Herbert Alone, Whitney

The Chick Book, Williams



Field Trips

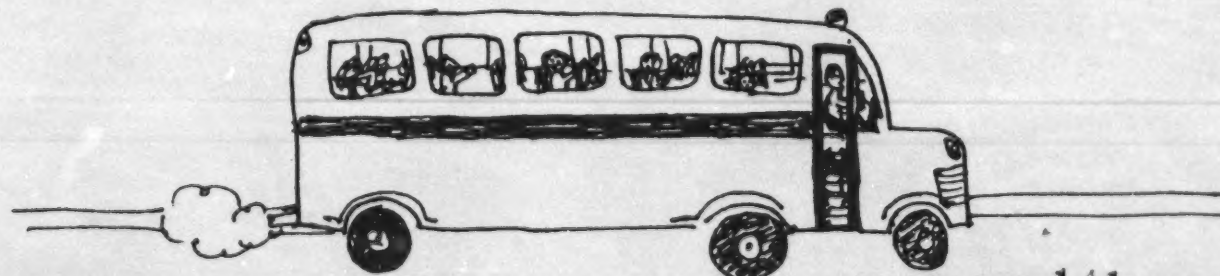
-Visit a pet store: If possible, call in advance so that the salespeople can show you around. Perhaps you can purchase a pet for your school or home.

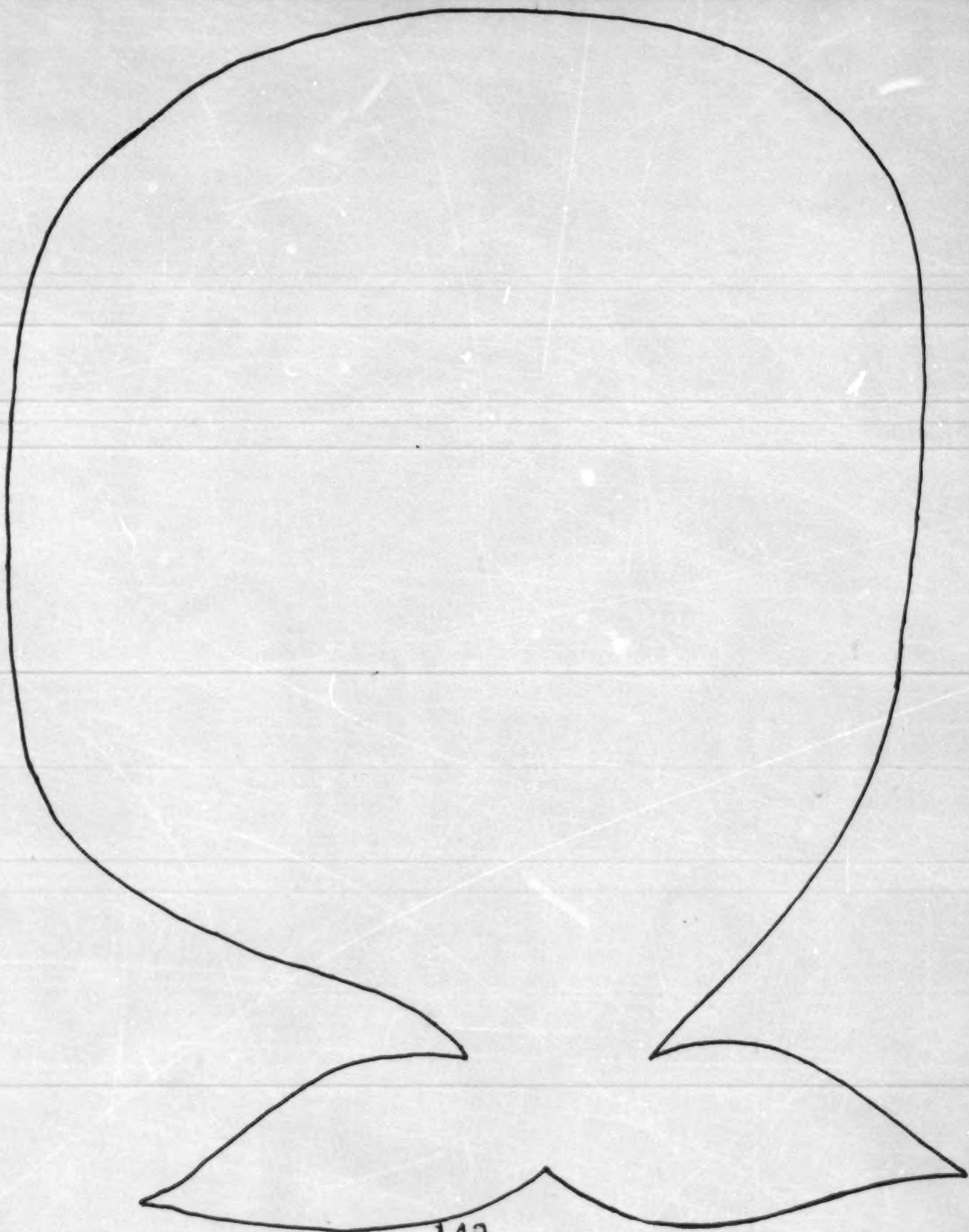
-Visit a Veterinarian's office: The Veterinarian can show you his/her office, lab, kennels, and the children can learn about proper pet care.

-A visit to a Pet Grooming Salon can be great fun for young children. We found a place where the owner also trained dogs and he brought his entire show out to our school!

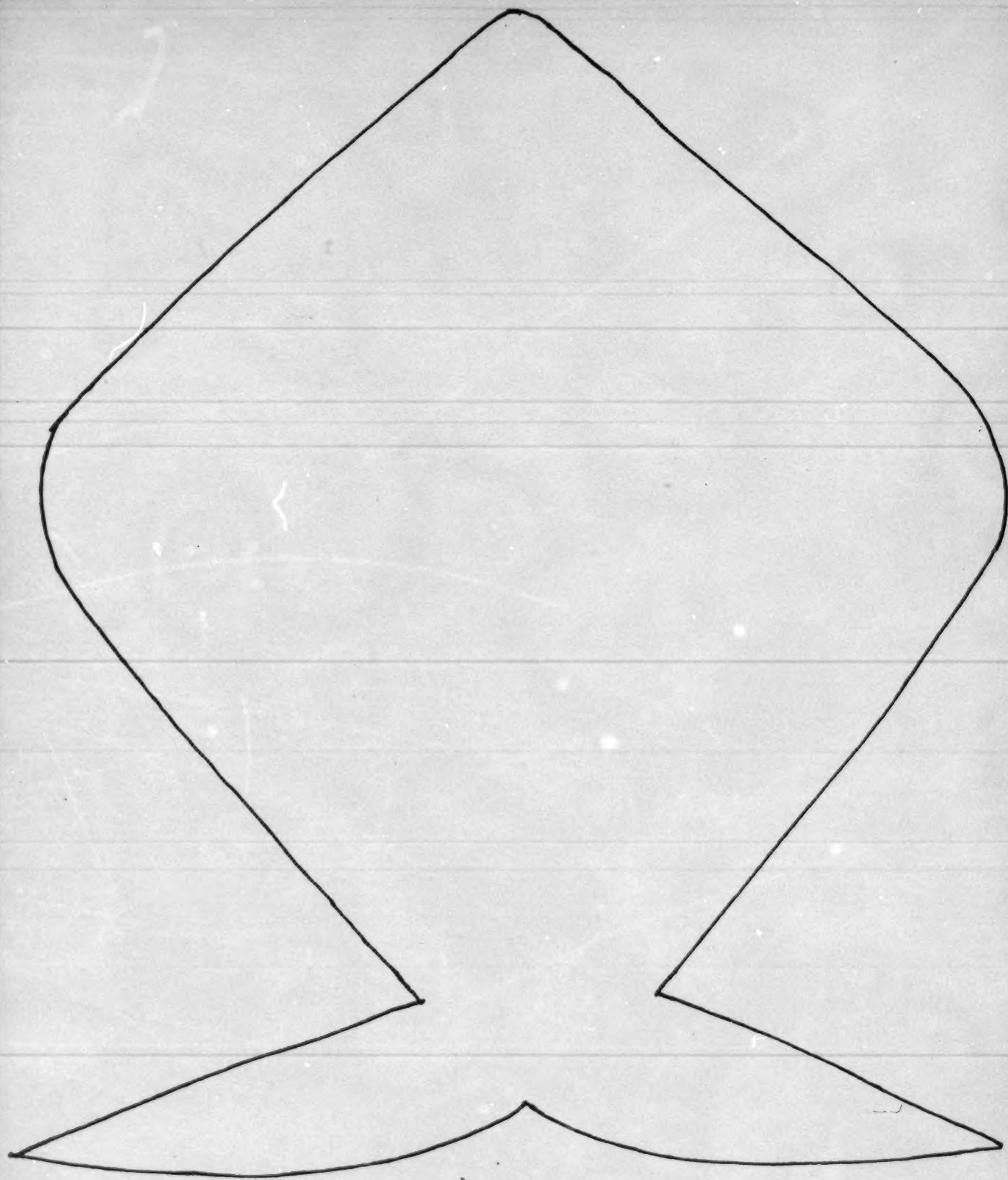
-Visit a farm, where the children can learn about farm animals and how different they are from house pets. Talk with the children about how farm animals are raised and used.

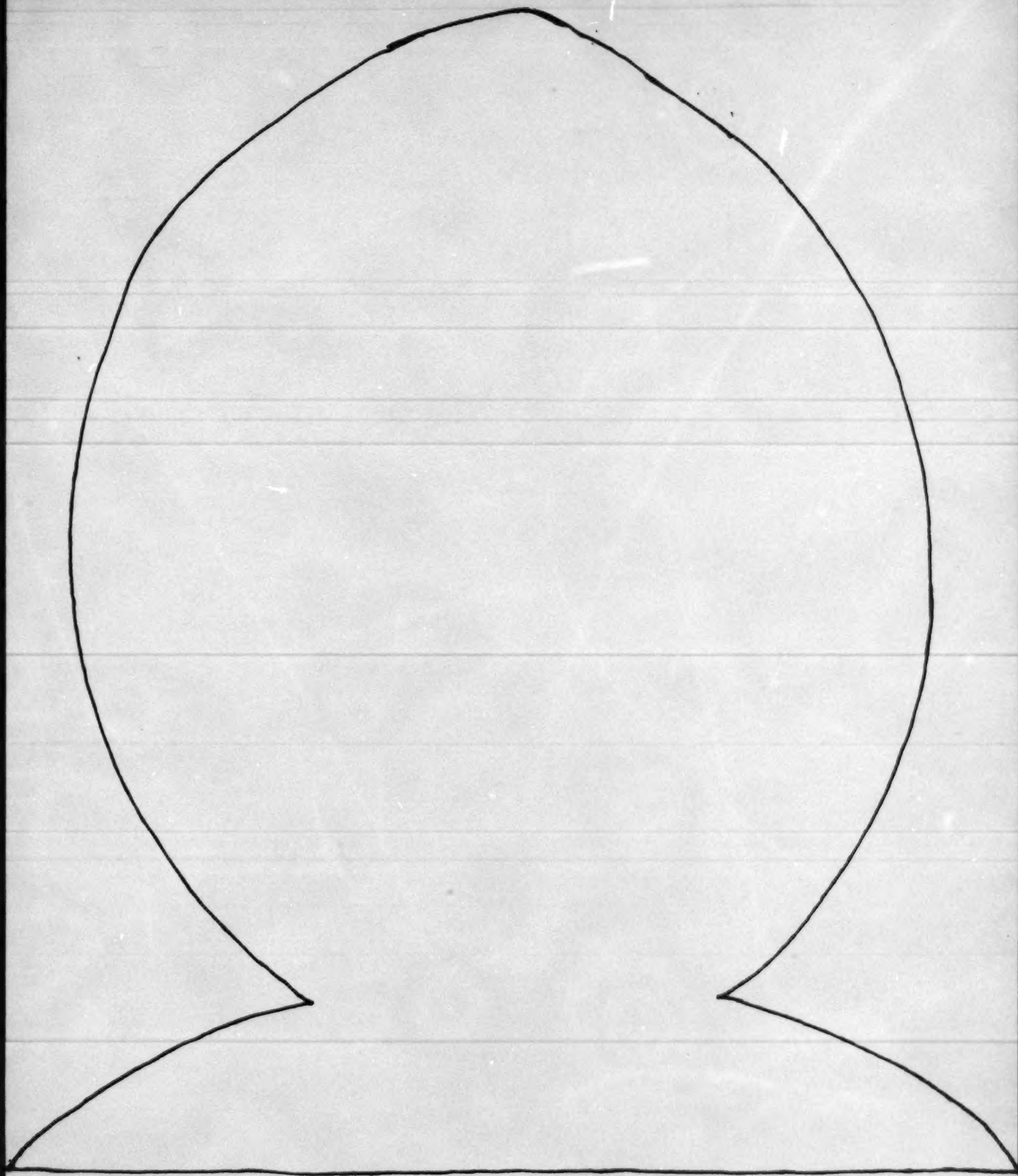
-Visit a Zoo: Children love the zoo, so if you are near a zoo, make a trip!





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U. 3. 1

While many of the activities contained in Earth, Sea, and Sky are simple and have been used before, the emphasis here is different. We want to create an awareness among young children about our environment and how to care for it. An activity such as the Recycle Collage, for example, is one which has been done by parents and teachers countless times before. However, by beginning the project with a "garbage hunt", we can show young children how things that they picked up as garbage can be used in other ways. In turn, we can show young children that to recycle means to reuse in either the same or a different form.

The activities in this book are a guideline, a beginning to creating environmental awareness among young children. The list of activities is not inclusive. Much can be added, deleted, or varied to fit your needs and the needs of your children. Use these activities to create your own curriculum or simply to have fun with young children.

Environmental awareness begins with young children. If we can create a concern for the environment at a young age, we will be helping to preserve our environment in the future.

